

WELCOME BACK Or WELCOME ABOARD! --- Herein we start the sixth year of publication, supporting a video game/ computer system that is still technically quite advanced for the day. In the last year, Astrocade went into a Chapter 11 bankruptcy and came back out of it. During the whole year, sales of the unit dropped, prices dropped, distributors and dealers dropped, supplies dropped. Into that breach, a group of independent producers appeared to provide us with cartridge games. We have Treasure Cove; BlastDroids; Sneaky Snake; Ms Candyman; plus Muncher, the P-C M-N derivative. Now that Astrocade is back, they will also be working on more games to support the system. SOCCER may be available by the time you read this. It is a 4-player game with similar characteristics to Football. The Astrocade people are looking for programmers - people with ideas for games, plus people who can translate these ideas into computereze. Contact the Astrocade office in Columbus if you have any talents in this direction.

For those of you interested in publishing your own material, or in selling it to the other game manufacturers, a book now on the market may help. Published by Writer's Digest, it is called "1984 PROGRAMMERS MARKET". The first 36 pages offers guidelines into preparation of material for future sale. Lots of hints and tips. The remaining 170 pages lists the pertinent data of virtually every company (500+) that buys software along with the subject areas of their interest, payment arrangements, which computers they cover, how software is to be submitted, if they accept contract work (rather than individual submissions), and such material. \$16.95 softback

ADDRESS CHANGES that should be noted - Home Arcade Electronics is now CPU ELECTRONICS, located at 2972 S. 6th Street, Klamath Falls, OR, 97603 (503) 884-3225 /// and Mike White Software is at 4858 County Line 2, Box 373, RD #1, Wakeman, OH, 44889

TUTORIAL materials and writers are needed to keep that segment of the ARCADIAN going. Authors, paid at the rate of \$25/page, are requested to contact Don Gladden, 59400 Nine Mile Rd., South Lyon, MI, 48178. Also, if there is a subject

you want discussed in detail that we have not yet broached - or you need added information, contact Don or myself, and we'll see about support.

From p. 2:

such as AVALANCHE you will see some "blinking". This does not harm the play value at all. The movement is so lightning fast you won't even care. There are lots of machine routine calls throughout this BASIC program and I would recommend for beginners and intermediate programmers to look inside at some of the strange tricks that Mike pulls off (especially in 16k). This is Mike's first effort at a commercial product and I think you will agree that we can expect a lot from him in the future. If you like fast, furious action I'm sure you won't be disappointed in QUADRA for \$15.95. I feel it is definitely worth the price. Mike's new address is: Michael D. White 4585 County Line 2 Box 373, R.D.#1 Wakeman, Ohio 44889

I am going to try to get a column to print every month but due to the limited availability of extended memory products there may be some months that it won't appear. There is quite a bit out there and more being produced all the time so as time goes on we may get better established. I got a call from Rusty at R&L Enterprises a few days ago. It seems that they are eager to get one of their 64k boards to me for review. I understand they have some exciting plans for our system. I'll let you know when the board arrives, and when I gain some familiarity with it you will be hearing all about it.

Remember, a s.a.s.e. will insure that you receive an answer to your comments and questions.
DAVE CARSON P.O. BOX 39 KIPTON, OHIO 44849
(216) 774-4645

SMALL LETTERS in programs-the code:

a = → b = x c = ÷
- = ← ' = ↓

P. S. SPECIALTIES

544 E. Overlook • Eastlake, Ohio 44094

HARDWARE/SOFTWARE DESIGNS & SUPPLIES
- YOUR EPROM SPECIALISTS -

Production Runs of 5 to 5000

JOE POELKING
676-0603

MIKE SKALA
(216) 951-2564

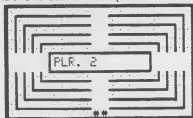
EXTENDED MEMORY PRODUCTS REVIEW by Dave Carson

QUADRA by Mike White Software is the featured program for review this month. Mike is just now getting ads set up for the ARCADIAN and the SOURCEBOOK so many of you haven't yet heard of him or QUADRA. In Vol. 5 page 125 there was an article on File Search. This was written by Mike and contained the first mention of his product. There has been an address change since the article and a correction will appear near the end of this column. In making preparations for this review I have been struggling with a question of ethics. Whether or not to even do it, since Mike is a personal friend and I have seen QUADRA progress from the idea stage. The answer was to tell the readers that, even though I will try not to let it influence the review, a certain amount of bias may be present.

QUADRA is a game that could fall into a category with games such as GORF or TRON since it is a group of several games tied together to form one. It first came to life in Astro-BASIC in a unique format. An approximately 10k program being executed in an 1988 byte memory. This was accomplished in the same way that disk based systems run very large programs. Reloading or replacing the contents of the memory and leaving the necessary variables and such intact. Since this required quite a bit of tape shuffling, the logical thing was to set it up in extended memory. A 4k format was next to appear and then the "super deluxe" 16k version. All three versions are currently available. They all share the same price and they all play the same. The differences being less tape maneuvering for 4k, and none for 16k, and some extra frills and fancies for the E.B. formats. By the way, Mike offers a free update for current owners, to any larger format just for sending in your original tape. This review will be based on the 16k program but will point out the major differences for the other variations.

In 16k only, the load is quite lengthy but you are treated to a nicely animated title page. You also will be told periodically that the load is progressing properly. Since all formats have the same scenario, the instruction sheets apply to all. Individual notes containing the differences are included. The documentation is clear, easy to understand and complete.

The game accommodates from one to four players on individual control handles. Following the input of # of players, player #1 will see the screen divided into 4 sections containing "???" and be prompted to choose a game. An arrow in the center rotates to pick a quadrant. The four games are arranged randomly and may change. When a game is completed by one of your three "lives", it is marked as complete on the selector screen. If incomplete, the name remains visible so you may return to it or choose another quadrant. After a life



SMASH UP

is lost or a game completed, you will return to the selector. If all four games become completed, it automatically progresses to the more difficult level; #2 or #3 on up as high as you can get.

The four quadrants contain games that are variations of old coin-ops and some that are brand new concepts. SMASH

UP is similar to HEAD ON. It seems every computer and game system uses this interesting game idea in one or more variations. Your car moves counter clockwise through a rectangular maze, erasing dots while avoiding the computer car (traveling clockwise). UFO ATTACK has some similarities to SPACE INVADERS among others. Your movable, land based cannon must eliminate four waves of descending, shooting invaders and then destroy the "Mother Ship". LASER AND SLIDE actually is made up of three separate challenges. The laser segment is a shoot-out between your laser gun on the left and the computer on the right. The slide game is played like the coin-op AVALANCHE. You have to catch 30 falling rocks in an ever shrinking basket. As an intermission between the two, you play a simplified break-out type of game called BRICKBUSTER. With your paddle you bounce the brick upwards against a wall, knocking out sections. Bounce a brick through a hole to finish. Make this one last as long as possible to gain extra points.

SAFE CRACKER is a totally new and unique game. You begin standing atop a maze with a room in the center containing a trap door. In the room is also an electrified robot. (shocking!!) He guards the maze against intruders. In the first level he isn't too fast or intelligent, but look out in later levels. In each corner of the maze is a small cubicle. In one of these you will see a key. Go get the key and go out the trap door. You will automatically be pulled through a "tunnel" which proceeds to the top of a second maze room. This one is just like the first except there are two keys. The third and fourth rooms have like numbers of keys. While all this is being done, a "bomb timer" is constantly counting down the seconds to zero hour! After having picked up 4 keys and passing through the trap



SAFE CRACKER

door you will be deposited in the room with the safe. By using the knob to dial on-screen numbers, you must find the three number combination. Then use the joystick to open the safe in the 4k and 16k versions. In 4k the game is now complete. If you have the 16k game you must now defuse the bomb which is still counting down. The bomb is in the safe along with the bomb instruction manual and a pair of snippers. You turn the pages of the manual to find out what sequence the wires must be snipped. The wrong sequence and BOOM! There are two problems. The bomb timer is still counting down and a robot shorted out the lights. You are in the dark with only the small spot of a flashlight to see to read the book and snip the wires.

Playing QUADRA requires skill and quick reflexes in each segment. It is a game that cannot be played in just a few minutes. Since the selector screen chooses from four titles, practice on individual games is impossible. To correct this, Mike includes a menu driven file search practice program on the reverse side of the tape. The main QUADRA side, he calls the Marathon. On the practice side you may play multi player versions of the four games and also a version of ping-pong. You may practice for the "Marathon" or simply play your favorites.

QUADRA has lots of color and it has sound effects for literally everything. It is very unique and well done. This is a good game for an all night session. The graphics are handled nicely although in some of the simpler segments

1. <CRYPT-O-GRAMS>

2.

3. BY KEN SPRINGSTEEN V.4 ARCADIAN, P.42

4. MOD. BY R. DE HAYE FOR EASIER USE.

5. HAS PRIVACY CURTAIN.

6.

7. CLEAR ;&(10)=180

9. BC=135;FC=40

10. BOX 0,0,94,10,1;CY=0;CX=-42;PRINT "<CRYPT-O-GRAMS>";

15. FOR 0=1 TO 950;NEXT 0

45. NT=1

60. CLEAR ;Z=0;V=0;A=0;B=0;D=0;E=0;W=0

90. CY=15;PRINT " PRINT 5 TO 24 CHARACTERS";PRINT ;PRINT ' PRESS "GO" TO SCRAM

BLE

95. PRINT ;PRINT ' "" TO HIDE, "↑" TO SEE';FOR A=1 TO 1200;NEXT A;CLEAR

100. CY=35;CX=-42;PRINT "<CRYPT-O-GRAMS>";CX=-70

105. CY=0;FOR A=1 TO 24;TV=45;NEXT A

135. CY=0;CX=-70

136. FOR A=1 TO 25

137. @(A)=KP;IF @(A)=96&(10)=40;GOTO 137

138. IF @(A)=94&(10)=180;GOTO 137

139. IF @(A)=13K=A-1;GOTO 137+20b(K>4)

140. IF @(A)=31IF A>1A=A-1;CX=CX-6;TV=45;CX=CX-6;GOTO 137

141. IF @(A)=31GOTO 137

142. IF (@(A)>99)+(@(A)=42)GOTO 137

143. IF &(23)=16MU="Q"

144. IF A=25GOTO 137

145. TV=@(A);NEXT A

157. BOX 0,0,160,30,2;&(10)=180

180. CX=-70;GOSUB 375

270. CY=-32;CX=-36;PRINT #0,K," CHARACTERS

275. CX=-70;FOR A=1 TO K

285. NT=5;B=KP;IF &(23)=16MU="Q"

290. IF (B=13)+(B>99)+(B=42)+(B=31)GOTO 285

295. CY=-16;TV=B;IF B#@A)GOTO 330

300. D=CX;CY=0;CX=-70;FOR M=1 TO K;IF *(M)=B*(M)=94;GOTO 310

305. NEXT M

310. CX=CX+6b(M-1);TV=42;CX=CX-6;FOR W=1 TO 100;NEXT W;TV=32;CX=D

315. NEXT A;GOTO 345

330. NT=0;D=CX;E=CY;CY=18;CX=-15;PRINT "WRONG!";NT=10;&(20)=100;MU="?";MU="";FO

R W=1 TO 700;NEXT W

331. CY=18;CX=-15;NT=0;&(20)=0;PRINT " ";CX=D-6;CY=E;PRINT " ",

332. CX=D-6;CY=E;V=V+1;NT=3;GOTO 285

345. NT=2;CX=-60;CY=20;PRINT "YOU GUESSED IT WITH";CX=-52;CY=11;PRINT #0,V," EXT
RA GUESSES!349. FOR A=256 TO 125STEP -3;&(16)=100;&(17)=A-2;&(18)=A+2;&(19)=250;&(22)=255;NE
XT A355. CY=-31;NT=5;&(10)=142;PRINT "205060706050607000500050000";FOR W=1 TO 500;NEX
T W;NT=3

365. RUN

375. FOR A=1 TO K;*(A)=0;NEXT A

380. FOR A=1 TO K

390. M=RND (K);GOTO 390+10b(*(M)=0)

400. *(M)=@(A);NEXT A

410. FOR A=1 TO K;TV=*(A);NEXT A;RETURN

CRYPTOGRAMS was originally submitted by Ken Springsteen. In this version, (Astrobasic only), the down arrow allows you to enter the letters without their appearing on the screen.

Gifts from ABC HOBBYCRAFT'S astrocade/UNDERGROUND

ABC Hobbycraft is your one-stop source for the BEST in independent cartridge software for ASTROCADE! Here are four great stocking stuffers for your favorite ASTROCADE Undergrounder at Christmas, and they're all just a phone call away! Use your VISA or MasterCard (or pay COD or by check/money order) and order from our 24 HOUR ORDER LINE at (812) 477-9661! Or write ABC Hobbycraft, 2155 E. Morgan Avenue, Evansville IN, 47711. Enclose a stamped, self-addressed envelope for our newest price list and your FREE copy of our ASTROCADE UNDERGROUND newsletter. When ordering, send \$1.50 (\$2.50 in Canada) for shipping and handling for each complete order.

WE ARE THE ASTROCADE EXPERTS, with more experience than ANY other retailer! Call us and see why people think of ABC HOBBYCRAFT first, when they think of ASTROCADE!

HAVE AN
astrocade
Christmas!

Sneaky Snake

It's slipperier than a centipede, and faster than anything you've ever seen before -- it's SNEAKY SNAKE, on cartridge for Astrocade from New Image Software! This HDT version of an all-time arcade classic sends the Snake slithering among the mushrooms toward YOU! Shoot quick, and watch out for the Spider! Only \$32.95!

Ms. Candy Man

Who is that charming young lady guarding the candy store? It's MS. CANDY MAN, and in her new cartridge game from L&M Software, you can help her gather the scattered lifesavers from the game grid while avoiding the nasty jokers and other monsters! This game has more graphics sound and animation than you can handle! Use the color radar to watch for vanishing monsters, and take advantage of blue-screen bonuses! Look out! When Ms. Candy Man gets knocked off the game grid, an animated ambulance carries her away! A sweet treat for only \$29.95!

Treasure Cove

Raid Davy Jones' Locker for valuable treasures, but beware the deadly denizens of the deep! With Esoterica's TREASURE COVE cartridge, you become a brave scuba diver (beautifully animated in full color) recovering treasure while avoiding the fatal touch of over 20 types of marine life! New animated creatures appear with each screen, and the continuous music track adds excitement! A sure winner for only \$32.95!

Blast Droids

This may be the deadliest game ever for the Astrocade! The BLAST DROIDS whirl and spin in Esoterica's cartridge game. You must shoot them quick, while maneuvering your spaceship around deadly walls of force. One contact is fatal -- you get no second chances. Can you survive the challenge? You'll have to be fast, accurate, and clever! Any space pilot can shoot asteroids -- but only the best can hope to destroy these deadly, drifting horrors. Super-challenging play for only \$32.95!

HAVE AN **astrocade** Christmas!

Make this an **Astrocade Underground** Christmas for someone on your shopping list! If you are one of the thousands of underground **Astrocade** fans who has discovered the world's BEST video game computer, why not share your discovery with your friends and family this Christmas -- at a budget-pleasing price!

List price on the **Astrocade** system is \$299.95. ABC Hobbycraft has been offering the system at the special low price of \$149.95. But now, for this limited Christmas offer, ABC Hobbycraft has a number of brand-new, fully-warrantied **Astrocade** systems for only \$99.95!

And we won't stop there! If you buy an **Astrocade** system NOW at this low, low price, ABC Hobbycraft will send you a Videocade cartridge absolutely FREE! Choose one from the following list of hits:

Astrocade BASIC / Galactic Invasion / Baseball / Dogpatch / Biorhythm

Choose any one of these five cartridges FREE as your Christmas gift from ABC Hobbycraft! Keep it or use it as an additional Christmas present for your favorite **Astrocade Underground**!

Plus, no matter what cartridge you choose, we will throw in a FREE DEMO cartridge as well! The DEMO is a true collector's item, designed to automatically demonstrate the **Astrocade**'s built-in features for **Astrocade** dealers. This limited edition cartridge was never offered for general sale, but you can have one, absolutely FREE with this offer!

Look at the savings!

		ORIGINAL LIST PRICE	
ASTROCADE system		\$ 299.95	
FREE cartridge	up to	59.95	
FREE DEMO cartridge		29.95	ALL this only
TOTAL VALUE		\$ 389.85	
YOUR COST (special)		99.95	\$99.95!
YOU SAVE		\$ 289.90!!!	

This offer is limited, and may be withdrawn without notice at any time! This is NOT a closeout (we carry **Astrocade** exclusively, year-round), nor are these used or refurbished systems! We are offering absolutely new, in-the-box **Astrocade** systems at an unheard of price because we want to expand the **Astrocade Underground** and bring more people to **Astrocade**!

Make this an **Astrocade Underground** Christmas, and let your friends and family in on the fun of **Astrocade**!

(Add \$1.50 for shipping/handling -- \$2.50 in Canada)
Call 24 hour order line (812) 477-9661 to order,
or write ABC HOBBYCRAFT, 2155 E. Morgan Avenue
Evansville, IN 47711
VISA and MasterCard accepted.



THE GAME PLAYER

by Michael Prosiace

- 1) Ms. CANDYMAN
L&M Software
- 2) Tape A-1
Astrogames

Ms. CANDYMAN

Hoping to capitalize on the huge success of their cassette tape CANDYMAN, (Arcadian Vol. 5 no.3) L&M has released its very first cartridge, "Ms. CANDYMAN." From all indications, it appears that this debut cartridge is going to be quite popular, for the graphics, sound effects, and game play are of exceptional quality.

The cartridge, once inserted into the computer and RESET pushed, will begin immediately. A complete 25 second rendition of the tune "Good Ship Lollipop" plays while the title screen unfolds, featuring some very attractive artwork that illustrates the game's title, two giant red and white candycanes tied together with a decorative bow, and the game's authors.

At this point, the candycanes will disappear, and on the screen will come the request to select one or two players via your joystick. The player(s) may then choose from three skill levels: Normal, Abnormal, or Insane. You will receive three "lives", with a bonus life awarded every two screens.

The playing field will instantly appear. Unlike the CANDYMAN tape, which was restricted to a two color screen due to the computer's limitations, the variety of colors in the Ms. CANDYMAN cartridge is one of the finest we have seen in any cartridge. There are many, and they are brilliant. It appears that the designers, L&M and Bit Fiddlers, have successfully utilized screen resolution to its fullest. For example, the character Ms. Candyman is yellow, with a lavender ribbon in her hair, red lips, and two blue eyes. (Colors may vary from t.v. to t.v.). The ghosts and goblins are also multi-colored, as is the playing field.

Perhaps most impressive of all, however, is the fact that there can be up to seven multi-colored, moving characters on the screen at one time! They wave their arms, smile, jump up and down, kick their feet, and turn their heads, too! The animation and detail are so well done, that they almost look like real cartoon characters on your television.

As to the game itself, you the player will have your Ms. Candyman positioned at the top-center of the screen. The play field is essentially the same as the one in CANDYMAN, but it looks so much better. Your goal is to eat all the lifesavers on the screen, worth 99 "calorie" points each, while trying to avoid the ghosts and goblins, who want to eat you. During the first half of the screen, they will be after you. But during



the second half, they will be guarding the last lifesavers closely. All lifesavers must be devoured before a new screen appears. If a ghost or goblin nabs Ms. C, she will plummet head first to the bottom of the screen, where an orange tow truck will drive up and take her away. Sometimes she will get hurt, in which case a Red Cross ambulance, complete with siren, will pull up and transport her off the screen.

In screens one and two, it's you against two ghosts. In three and four, a goblin is added. This continues until a total of six of these creatures are on the screen with you. Believe me, it gets crowded, as we found out by the time we made it to the 11th screen, losing at this point with a score of 111,177.

The number of ghosts and goblins in skill level 2 and 3 are the same, except that they are added to the game sooner. The level of difficulty increases slightly with each new screen, as does the speed of play action. After every two screens will come the "blue" screen, during which the player has a brief allotment of time to eat ghosts, earning 990 points for each ghost devoured. An additional life is also awarded at this point. We were able to devour 13 ghosts during one particular blue screen.

At the base of the t.v. screen is displayed number of lives, score, and a cage, in which one can see the goblin who is next to appear on the playfield. He just sort of waits there, jumping up and down anxiously and waving his arms wildly. This cage also doubles as a "radar" screen, for the higher levels of play some ghosts may disappear briefly. You can spot their relative position on the "radar" screen.

Overall, Ms. CANDYMAN is an exceptional game, both in uniqueness and game play. We are enjoying it very much. One other nice fact concerning this cartridge is that it is priced at a reasonable \$29.95, even though it is better than several of the other new cartridges that cost more.

ASTROGAMES

Good news! A new software manufacturer has sprung up, this one calling itself ASTROGAMES. Their first product for the Astrocade system is a five-program tape containing four games and one musical selection. The programs are all in Astro Basic (AB), and look pretty good.

Let's take a look at these games from ASTROGAMES Tape A1, the titles of which are WAH'S REVENGE, SUPER PAC, DEFENSE PROFESSIONAL, and METRO ATTACK. The musical selection is PETER PIPER.

Upon loading the tape, you will see before you a menu, just like a cartridge game. The five titles are numbered, and the computer asks you to select a game by turning the knob to the desired number and then squeezing the trigger. (Standard procedures) The computer will then search out the game you have selected and automatically load it for you! In addition, after making your selection, the computer will inform you of the amount of time it will take to search and load that particular game.



Nov 29 1983

WAH'S REVENGE opens with a full screen graphic display, as good as any other of the graphic illustrations we have seen from other companies. It is a one-player game, (as are all the games on this tape) with the player able to select a skill level from 1 to 7 and the number of ships from 1 to 7.

In seven seconds a light blue landscape is completed, with four "Wahs" hovering in the sky. "Wahs" are mean looking little creatures with beady eyes that drop bombs on your ground-laser weapon. One at a time, they will drift across the screen sporadically, and will periodically fire down at you. The player controls his laser base, moving it left or right across the ground so as to position it under a Wah and fire up at it.

At higher skill levels the game action is accelerated. For those of you who enjoy sound effects, there are plenty of them in WAH'S Revenge. All of us at Game Player think this is a very well done game.

SUPER PAC is another attempt by yet another company to bring PAC MAN to the Astrocade system. Fortunately for us, but unfortunately for these companies, we already have a fantastic PAC MAN cartridge called MUNCHER*. So, nothing on tape is quite going to add-up to the quality, speed and color of a cartridge version. However, ASTROGAMES has made a notable attempt to do so. Their version opens with the Pac Man theme tune, then draws an enormous, random maze. There are the usual four power pills and one ghost that tries to chase you. Unlike PAC MAN, in SUPER PAC you have the ability to eat through maze walls. Speed of movement is fair. The problem with the game though is that the ghost will stop chasing you if he runs into a wall that's between you and him, until you move above, below, right or left of whatever is blocking him. This tends to take the challenge out of the game. Our players gave SUPER PAC a so-so rating.

DEFENSE PROFESSIONAL is somewhat similar to the coin-op DEFENDER. The skill level is pre-set and number of ships is set at three. The screen shows a green playfield, upon which will be one of the player's ships and three alien vehicles. The player's ship is located on the left, pointing right. In can be maneuvered up and down only. The three aliens slowly cross toward the player from the right. They are destroyed by the player's laser beam, which has limited range. If you allow too much time to elapse between each destroyed alien, you will lose a ship. The alien ships do not fire back.

This game is best described as rather easy-going and laid back. Game action is a bit on the slow side. Young game players should find this game okay, but the older players may become bored early.

METRO ATTACK 1988, the fourth game on the tape, is a surprisingly good translation of the popular coin-op MISSILE COMMAND. It looks much the same as the coin-op and basically plays the same.

You can select up to nine "lives", and will be firing up from one of five stationary bases. From the sky will come three slowly descending killer beams, that inch their way in a zig-zag fashion toward the surface. Using your joystick, you must position a "+" symbol in front of the beam, and then pull the trigger in order to destroy it. There is a limited amount of fuel for firing each base. Rotation of the knob determines which base will fire. Bonus fuel is available.

METRO ATTACK is very challenging and fun to play. If you like MISSILE COMMAND, you should be happy with this version for the Astrocade system. All of us at Game Player headquarters enjoyed the game.

PETER PIPER is a nice bonus to this four-game package. It is a lively, spirited tune in three voices. You, too, will probably like it as much as we do.

Overall, this ASTROGAMES tape is pretty good. Hopefully this new company in Canada will be releasing more games in the near future. Currently their tape A1 is available only directly from them. It's cost is surprisingly low, a bargain at only \$9.00, and you can purchase it by writing to ASTROGAMES at this address: 3020 Cook Street, Victoria, B.C., Canada V8T-3S9.

* **THE** one and only real PAC MAN cartridge, which sounds and plays just like the coin-op. Write to me for more info at Game Player headquarters.

--- SCORE BOARD ---

High scores thus far are:

Dungeons of Dracula	3,440	Allen Showalter
Bally Pin II	234,850	Allen Showalter
Incredible Wizard (2 player)	247,350	Allen Showalter & Chris Embres
Exitor's Revenge	31,575	Fred Olivas
Ms. Candyman	111,177	Michael Prosisie
Pirates Chase (2 player)	1,942,443	Kelly and Michael Prosisie

SEND your scores and questions to: GAME PLAYER, 48-G Ridge Road, Greenbelt, Maryland 20770. Please include a stamp if you would like a reply.

Vol 6 No 1

ARCADIAN

Nov 29 1983

```

1 .146 641 641 641000000
5 GOSUB 8;GOTO 100
6 CX=-39;RETURN
7 A=RND (99);B=RND (99);RETURN
8 N=-24573;NT=5;FOR Z=NT0 N+21;MU=Z;NEXT Z;NT=0;RETURN
9 A=RND (12);B=RND (13)-1;RETURN
10 IF P=1CY=30;CX=-70;Y=-3;BOX -45,32,70,16,2
11 IF P=2CY=30;CX=10;Y=-14;BOX 40,32,75,16,2
12 IF P=3CY=10;CX=-70;Y=-25;BOX -45,12,70,15,2
13 IF P=4CY=10;CX=10;Y=-36;BOX 40,12,75,15,2
14 RETURN
20 IF V=1GOSUB 7;@(P+8)=A+B;GOSUB 10;PRINT #0,A,"+",#0,B,"=",
21 IF V=2GOSUB 7;GOSUB 30;GOSUB 10;PRINT #0,A,"-",#0,B,"=",;@(P+8)=A-B
22 IF V=3GOSUB 9;GOSUB 10;PRINT #0,A,"b",#0,B,"=",;@(P+8)=AbB
23 IF V=4GOSUB 9;C=AbB;GOSUB 10;PRINT #0,C,"c",#0,A,"=",;@(P+8)=B
24 @(P)=CX;@(P+4)=CY;RETURN
30 IF A>BRETURN
31 GOSUB 7;GOTO 30
59 CX=73;RETURN
60 CY=-3;RETURN
61 CY=-14;RETURN
62 CY=-25;RETURN
63 CY=-36;RETURN
70 FOR Z=0 TO 20;TA=*(Z)C100;TB=RM;FOR VA=15TO 1STEP -1;VB=VA-1;NEXT VA;NEXT Z;
RETURN
79 X=0;BOX X,Y,15,9,2;X=X+10
80 BOX X,Y,6,4,1;LINE X+5,Y+3,4;BOX X+6,Y+4,3,2,1;BOX X+6,Y+4,1,1,2;LINE X-6,Y
-4,1;LINE X-7,Y+1,4;LINE X-4,Y+1,1;LINE X+5,Y-4,1
81 IF X>60GOTO 85
82 RETURN
85 BOX 0,23,158,37,2;CY=20;CX=-60;PRINT "PLAYER #",#0,P," WINS!!"
87 GOSUB 70;IF TR(1)RUN
88 GOSUB 99;GOTO 87
99 FC=RND (32)*8;BC=FC-81;RETURN
100 CLEAR ;GOSUB 99;CY=0;INPUT " NUMBER OF PLAYERS?"U;IF (U<1)+(U>4)GOTO 100
110 GOSUB 8;CLEAR ;PRINT ;GOSUB 6;PRINT "ADD=1";PRINT ;GOSUB 6;PRINT "SUBTRACT=
2";PRINT ;GOSUB 6;PRINT "MULTIPLY=3
120 PRINT ;GOSUB 6;PRINT "DIVIDE=4";PRINT ;GOSUB 6;INPUT "YOUR CHOICE?"U;IF (U<
1)+(U>4)GOTO 110
130 GOSUB 8;CLEAR ;BOX 0,0,160,88,3;FOR Y=-2TO -44STEP -11;BOX 0,Y,158,10,3;NEX
T Y;BOX 65,-18,1,44,1
135 FOR P=1TO U;GOSUB 59;P;GOSUB 59;PRINT #0,P;NEXT P
140 FOR P=1TO U;@(P+12)=-65;@(P+20)=1;GOSUB 10;GOSUB 79;GOSUB 20;NEXT P
150 FOR P=1TO U
160 IF @(P+20)IF TR(P)=0C=(KN(P)+128)*3c4;@(P+16)=C
165 IF TR(P)=0IF JX(P)=10;@(P+16)=0;@(P+20)=0
166 IF TR(P)=0IF JX(P)=-10;@(P+16)=0;@(P+20)=0
170 CX=0;CY=0;@(P+4);PRINT #0,0;@(P+16)
180 IF TR(P)IF @(P+16)=0;@(P+8)*@(P+20)=1;GOSUB 10;GOSUB 79;@(P+12)=X;NT=P;MU=P;NT
=0;GOSUB 20
190 NEXT P;GOTO 150

```

Joseph Peoples
310 Sailfish Lane
New Philadelphia, OH 44663

HORSEACE upgraded from the original by Howard Brecheisen. This version adds a math program wherein the correct answers propel the horses to the finish line. This is in AstroBasic only, won't work with the old cartridge.

Also, you have
to enter some variables without
line numbers.

```

*(0)=3923 *(1)=3923 *(2)=4729 *(3)=4729 *(4)=3923 *(5)=3923
*(6)=4729 *(7)=4729 *(8)=3522 *(9)=3522 *(10)=3923 *(11)=3923 *(12)=4426
*(13)=0 *(14)=0 *(15)=0 *(16)=3522 *(17)=3522 *(18)=3923 *(19)=3923
*(20)=4426 *(21)=0 *(22)=17 *(23)=0 *(24)=3119 *(25)=3522 *(26)=3923
*(27)=4426 *(28)=4729

```


ARCADIAN

Rev. 29 743

```
10 CLEAR :BC=218;FC=149;NT=0;FOR D=0TO 13B2+4:0(D)=-1;NEXT D;CY=36;FOR D=1TO 6
:CX=-9;PRINT #1,D,"5";NEXT D;B=1;T=0;C=0
12 CY=36;GOSUB C:PRINT "3K";GOSUB C:PRINT "4K";GOSUB C:PRINT "FH";GOSUB C:PRIN
T "Y2";GOSUB C:PRINT "55";GOSUB C:PRINT "L5";GOSUB C:PRINT "CH";BOX -28,-1,2,B2,
1
```

```
13 H=13bB-9;GOSUB 75;GOSUB 18;GOSUB 37;GOSUB 48;B=B+1;IF B>2B=1;T=T+1
14 IF T<13GOTO 13
15 GOTO 76
16 IF U=1FOR S=60TO 88;MU=5;NEXT S;U=0;RETURN
17 R=3;RETURN
18 R=1;FOR D=0TO 4;GOSUB 32;NEXT D
19 D=0;R=R+1;IF R=4RETURN
21 IF D<0D=0
22 IF D>4D=0
23 CX=-42;CY=33-D*17;PRINT "<.",#1,R,"A=0
24 IF JX(B)IF A=0U=1;MU=88;0(D)=0;BOX -55,CY,12,12,3;A=1
25 IF TR(B)GOSUB 15;D=9;GOTO 28
26 IF JY(B)=0GOTO 24
28 CX=CX-12;PRINT " ",D=D-JY(B);IF D<0GOTO 21
29 FOR D=0TO 4;IF 0(D)=0GOSUB 32
30 NEXT D;GOTO 19
32 X=-55;Y=33-D*17;Z=RND (6);0(D)=Z;BOX X,Y,14,14,1;MU=88-Z*2;IF Z#Z*2ZBOX X,
Y,2,2,2
```

```
33 IF Z=6BOX X-4,Y,2,2,2;BOX X+4,Y,2,2,2
34 IF Z>1BOX X-4,Y+4,2,2,2;BOX X+4,Y-4,2,2,2
35 IF Z>3BOX X-4,Y-4,2,2,2;BOX X+4,Y+4,2,2,2
36 RETURN
37 C=1
38 I=C;CX=-18;IF C>6CX=29;I=C-6
39 CY=44-8*1;PRINT "a",;CX=CX-6
40 IF I=0GOTO 40
41 IF TR(B)GOTO 46
42 I=JY(B);IF I=0GOTO 41
43 TV=32;C=C-I;IF CX<C=7
44 IF C>13C=13
45 GOTO 38
46 IF 0(H+C)=-1TV=32;RETURN
47 GOTO 41
48 S=0;IF C>6GOTO 51
49 FOR D=0TO 4;IF 0(D)=C 5=S+C
50 NEXT D;GOTO 71
51 FOR D=0TO 4;5=0(D)+5;NEXT D;FOR D=0TO 4;FOR E=0TO 4;IF 0(D)<0(E)F=0(D);0(D)
=0(E);0(E)=F
52 NEXT E;NEXT D
53 E=1;F=1;G=1;I=1;J=1;IF C=13GOTO 71
54 FOR D=1TO 4;IF 0(D)=0(D-1)G=1;GOTO 57
55 GOSUB 65;IF 0(D)=1=0(D-G)E=E+1;GOTO 57
56 GOSUB 68
57 NEXT D
58 IF C<11GOSUB 65;GOTO 61
59 GOSUB 68;IF F<C-7GOTO 70
60 S=10bC-88;GOTO 71
```

YAHZEE the dice game originally written by Bob Wiseman, reworked for better playability. (Two players only) JX and JY move the indicator and locate the die to be rerolled. TR makes the move. The ending scoreboard keeps track of everything.

Klaus Doerge
#11 Westcreek Place
Plano, TX 75074

```
61 IF C<9IF I<C-4GOTO 70
62 IF C=95=25;IF I<3GOTO 70
63 IF C=105=58;IF I<5GOTO 70
64 GOTO 71
65 IF G>I J=I+1;G=I;GOTO 67
66 IF G>J J=G
67 G=1;RETURN
68 IF E>F F=E
69 E=1;RETURN
70 S=0
71 0(H+C)=5;GOSUB 72;NT=0;RETURN
72 CX=7;I=C;IF C>6I=C-6;CX=56
73 CY=44-1bB;IF 5<0PRINT " ";RETURN
74 PRINT #2,5,;RETURN
```

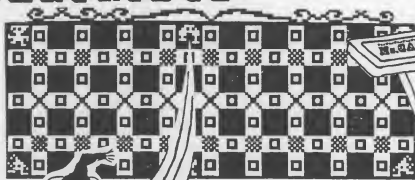
```
75 BOX -55,0,14,84,2;FOR C=1TO 13;5=0(H+C);GOSUB 72;NEXT C;CX=5;CY=-33;PRINT #
3,B;NT=1;RETURN
76 CLEAR :BC=98;PRINT " TOTALS OF SCORES";PRINT ;PRINT ;T=0;FOR B=1TO 2;C=0;D=
0;E=0;H=13bB-9;FOR F=1TO 13;G=0(H+F);IF F<7C=C+G
77 IF F>6E=E+G
78 NEXT F;IF C>6D=35
79 K=C+D+E;PRINT ;PRINT " PL.",#1,B," ",#3,C," + ",#3,D," + ",#4,E," =",K;IF T=0
M=M+K;A=K
80 IF T=1N=N+K;L=K
81 T=1;NEXT B
82 IF A>L O=O+1
83 IF L>A P=P+1
84 PRINT ;PRINT ;PRINT #5,0," / ",#0,M,#6,P," / ",#0,N;A=0;L=0
85 IF TR(RND (2))RUN
86 GOTO 85
87 CX=38;RETURN
```

Ms. CANDYMAN

CARTRIDGE



You keep track of disappearing
goblins on the radar screen



Beautiful music



\$29.⁹⁵

Please add \$2.00 Postage & Handling

Real arcade action with joysticks, 1 or 2 players and 3 levels of difficulty. More than 20 screens, each faster than the one before. Full screen display in exquisite detail. Ms. Candyman must pick up all of the lifesavers as quickly as possible while avoiding contact with the Ghosts & Goblins. During the first half of a screen the Ghosts or Goblins will try to catch you. During the 2nd half of a screen the Ghosts or Goblins will take up protective positions to keep you away from the life savers. Each contact costs Ms. Candyman 1 life and she will nose-dive head first off the bottom of the play field. A wrecker or ambulance will carry her off.

We accept Mastercard, Visa and COD orders. We also accept checks or money orders thru the mail.



Call 812-853-6895

SOFTWARE 8599 FRAMEWOOD DR. NEWBURGH, IN. 47630

10

ARCADIAN

Robert Fabris, continuing
3626 Morrie Drive
San Jose, CA 95127-9990

The SOURCE
TCD 959

FIRST CLASS
U. S. POSTAGE
PAID
Sunnyvale, CA
Permit No. 931

Dec 22, 1983



Vol 6 No 2

ASTROCADE NEWS The team is slowly working its way back to the land of the living, and will be supporting the Arcade Unit with some more cartridges in the early part of next year. They are currently selling the Arcade Unit direct from Columbus at \$59.95, including a Basic or any other cartridge of your choice. (6460 Busch Blvd., Suite 215, Columbus, OH 43229.) or contact Debby at 616-885-0130

PROGRAM PRIZE WINNER is Mike Skala for his FROGWAY. We run a contest every so often where five judges score the programs submitted on whatever basis they feel like. Each program is given a score of 1-10, and the results called in to the home office where they are tabulated. The winner of this contest then gains \$100 and the responsibility to be a judge for the next five contests, displacing the eldest judge on the panel. The programs are submitted to me by the authors, along with a note that the program is primarily their own work and not just a copy or translation. We must have at least three entries to have a contest.

SLAP ON A KEYBOARD??? Well, it isn't easy. A number of schemes have cropped up over the years to add a keyboard to the Arcade unit to supplant the keypad. Each one seems to have problems, as noone has yet published a foolproof method. We had ideas that came in through the cassette interface - sort of tricking the machine into thinking that a tape program was coming in. This required a serial output printer because the cassette operation is serial. We had ideas where a UART was used to convert the serial stream to parallel, and then come in the expansion connector. There is another idea that just parallels the keypad wiring with the keyboard input. A main problem is the keypad's shift mechanism, which has to be replaced or duplicated. The only successful additions have been those that appear after a memory add-on is incorporated (the Blue Ram or the Viper). We may illustrate some of these ideas in the next issue.

=====

GAME INSTRUCTIONS: **FLAPS UP! BY KEVIN O'NEILL FOR THE
NIAGARA REGIONAL B.U.G.**

In this one-player game of skill, you become the pilot of a WWI biplane. After returning from a dangerous mission, you try to land at your home airstrip, only to find that it is being repaired. You receive points for the amount of time you manage to spend on the runway, but watch out! When you see a box of repair supplies ahead, pull up quick or you will collide with it and have 30 points taken from your score. Once you pass 20 boxes, the game will end. A squeeze of the trigger will show you the high score of the day. More squeezes will bring simple instructions, & the game. Have fun with this one!

K. O'Neill

Dec 22 1983

ARCADIAN

Vol 6 No 2

PROGRAM INSTRUCTIONS

Two of the programs require extra material to be entered. The memory size (1800 bytes) allows a program of relatively small size to be retained. The computer will also store material in the "arrays", operate with it, and also transfer the material in the arrays to tape for long-term storage. These arrays are the (*) and the (%) functions, and each of the two authors used one piece

FROGWAY (P.16)

FROGWAY IS A GAME FOR ONE TO FOUR PLAYERS WHERE YOU TRY TO HELP THE LITTLE FROGS ACROSS A BUSY SIX LANE HIGHWAY INTO THE PONDS AT THE TOP OF THE SCREEN. USE THE JOYSTICKS TO MAKE THE FROG HOP, AND PLEASE, ONE FROG PER POND. THERE IS ONE MORE PROBLEM; CHUCKHOLES!! THE FASTER YOU GET ACROSS, THE MORE FLIES (POINTS) YOU ARE AWARDED. FINAL SCORES WILL BE POSTED, AND TR(1) WILL START A NEW GAME.

INSTRUCTIONS: ENTER THE BASIC LISTING, THEN LOAD THE MACHINE CODE PORTION WITH THE FOLLOWING DIRECT COMMAND... FOR A=20258 TO 20326 STEP 2;PRINT A; INPUT X(A);NEXT A .YOU MUST ALSO DIRECTLY SET THE FOLLOWING VARIABLES: BC=20275; O=20272; U=20265; V=20268; Z=20258. DUMP TO TAPE WITH :PRINT :PRINT X(20258),70

X(20258)=-8747	X(20272)=21052	X(20286)=-8961	X(20300)=3640	X(20314)=16
X(20260)=14113	X(20274)=-32216	X(20288)=-13825	X(20302)=1040	X(20316)=56
X(20262)=-177	X(20276)=-12032	X(20290)=-1	X(20304)=-129	X(20318)=124
X(20264)=-8653	X(20278)=-32567	X(20292)=-1	X(20306)=-1	X(20320)=186
X(20266)=10416	X(20280)=0	X(20294)=-1	X(20308)=-123	X(20322)=56
X(20268)=130	X(20282)=1794	X(20296)=-13825	X(20310)=1040	X(20324)=124
X(20270)=13311	X(20284)=20286	X(20298)=-8961	X(20312)=3640	X(20326)=130

Saturn Space Dock-Instructions

(P.15)

The object is to make as many safe landings on the green planet of Saturn without running out of fuel. Type in the program and load the *(X) array. Run it and prepare for a challenge. After the land appears 3 numbers will appear across the top of the screen. They are (1 to r) score, rate of descent, fuel. To land safely, you must land near the center of the pad with rate of descent between 3 and 7. Use the Keypad as your controls:

1 left thrust GO abort landing
+ right thrust ERASE main thrust

Drifting down will lower the rate/des. and the main thrust will increase. Use the 1 & + keys to guide your craft to the center of the pad, but wind may tend to blow you around. Crashing will cost you 500 pts, but since Aborting a landing costs only 50 pts, use it whenever you think you are going to crash. Bonus pts & fuel are awarded at the completion of each successful landing depending on your rate/des. & how close you are to the center of the pad.

Type in the * array after you have finished loading the program

*(0)=8669	*(6)=9523	*(13)=9523	*(20)=-32567	*(27)=7247
*(1)=8737	*(7)=9765	*(14)=9765	*(21)=128	*(28)=10780
*(2)=20258	*(8)=26662	*(15)=26662	*(22)=0	*(29)=10794
*(3)=-10929	*(9)=-32664	*(16)=-32664	*(23)=256	*(30)=5162
*(4)=-43	*(10)=128	*(17)=128	*(24)=1537	*(31)=10772
*(5)=13311	*(11)=-256	*(18)=-12032	*(25)=10502	*(32)=16682
	*(12)=13311	*(19)=-13871	*(26)=20265	*(33)=65

Dec 22, 1983

ARCADIAN

Vol 6. No. 2

```

1 CLEAR ;&(9)=-1;BC=7;FC=8
2 D=0;L=0;R=0
3 NT=-20;CLEAR ;CY=30;PRINT " ///// FLAPS UP! /////
4 CY=10;PRINT " YOUR MISSION:";PRINT
5 PRINT " STAY ON RUNWAY AS LONG AS
6 PRINT " POSSIBLE. - BUT WATCH";PRINT " OUT FOR BOXES OF REPAIR";PRINT " SUPPL
IES!"
8 NT=1
9 IF TR(1)CLEAR ;GOTO 14
10 GOTO 9
14 BOX 0,20,155,10,1
20 BOX 0,-30,155,10,1
25 BOX 0,-30,155,8,3
30 NT=0;CY=29;PRINT " ///// FLAPS UP! /////
40 NT=1
220 P=0
230 D=0
240 D=D+JY(1)*4
245 IF D<-20D=-20
250 GOSUB 1000
252 NT=0;CY=-30;PRINT R,L;NT=1
255 IF R=20GOTO 20000
256 IF D=-20L=L+3;MU=L
260 IF RND (6)=1GOSUB 2000
900 GOTO 240
1000 BOX P,D,10,2,1
1010 BOX P-2,D+2,5,1,1
1020 BOX P+6,D+2,2,2,1
1030 BOX P-3,D+2,1,2,1
1040 BOX P-3,D-3,1,1,1
1050 BOX P,D,20,10,2
1060 RETURN
2000 V=-20;R=R+1
2001 FOR S=-60TO 60STEP 20
2011 BOX S,V,11,6,3
2021 BOX S,V,9,4,3
2022 BOX S,V,11,6,2
2031 D=D+JY(1)*4
2034 IF D<-20D=-20
2035 IF D=-20L=L+3;MU=L
2036 IF D<-11IF S=0
2041 GOSUB 1000
2061 NEXT S;RETURN
3000 CLEAR ;SM=2;CY=-40
3010 X=X+JX(1)
3020 Y=Y+JY(1)
3021 K=2
3022 IF TR(1)K=1
3030 BOX X,Y,1,1,K
3040 GOTO 3010
10000 CY=D;CX=P;PRINT "*"
10010 FOR T=0TO 8
10015 BOX P+RND (4)-4,D+RND (4)-4,4,4,3
10020 FC=RND (32)*60
10030 MU=FC;NEXT T
10040 RETURN

```

Kevin O'Neill
6 Wood Dale Dr
St. Catharines, Ont
L2T 1Y8
CANADA

THE GAME PLAYER

... soars high in
the sky as a

FLYING ACE Wavemakers, tape #2

Now that the flood of new titles has slowed down a bit, we have time to check out some of the fine games that have been around for awhile..

One of these is Wavemaker's **FLYING ACE**, a game that puts YOU in the cockpit of a fighter plane, and lets you seek out and machine-gun down enemy planes.

FLYING ACE is indeed a nice game, featuring excellent, non-blinking graphics, and a full repertoire of sounds and music. It made it's revised appearance about two years ago, and was one of the first of several games to come from Wavemakers that would soon be described as "cartridge quality" material.

After the opening music, the computer requests the player to select the number of players, one to four, and number of planes, one to seven. This may be accomplished with the hand controllers. The screen will then reveal a cross-hair gunsight window, which is stationary at the center. A bi-plane will then appear at any point on the screen, and slowly move around throughout the screen area. Changes in pitch of the airplane's sound indicates a dive, climb, etc.

The player(s) uses his joystick to "pull" his gunsight into range directly over the enemy. The gunsight never moves from the center, and the joystick does not move the enemy plane. What it does is "move" the whole t.v. set (not literally) as if it were the nose of your plane. If you pull back on the joystick, the t.v. will raise up toward the enemy plane. If the enemy plane is to the right of your gunsight, you move your joystick to the right, and the t.v. screen will "move" towards the plane. It is tricky, and the ones who master the technique will be the true "Ace".

Up to 250 points are possible for a quickly shot down plane. You have a limited amount of time in which to shoot down the enemy. The longer it takes, the fewer points you will receive. In addition, each time you pull the trigger to shoot, you eat up even more time. A bell will ring as you approach the last few seconds. If you do not get the enemy in time, you will lose one "life" (plane). The player who is able to shoot down the enemy fighter plane quickly and with few misses will receive a bonus turn.

FLYING ACE is a real winner! We have had the tape for about a year, and frequently play it. It is not one of those tape games that sits on the shelf unplayed. The music is a real nice touch. It opens and closes game play, and is used after each plane is shot down. The sound effects of the machine gun sound very real, as does the sound of the plane when it dives.

FLYING ACE is a good candidate for being spiced up and put into a cartridge!

SCOREBOARD

Dungeons of Dracula	3,440	Al Showalter
Bally Pin II	336,700*	Stan Kendall
Wizard	453,200*	Stan Kendall
Exitor	31,575	Fred Olivas
Ms. Candyman	111,177	Mike Prosize
Pirates Chase	1,942,443	Mike Prosize
Space Invaders	7,045	Stan Kendall
Muncher	36,220	Mike Prosize
Solar Conqueror	11,488	Mike Prosize

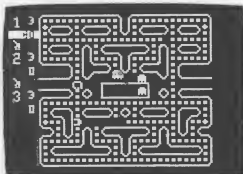
*Indicates new high score

NOTES: SOLAR CONQUEROR programming flaw? Maybe. When the score goes over 9,999, it changes to two digits instead of five, and six extra ships are awarded. Also, the sound effects become distorted. What's the story here? ?

So long for now. Send your high scores to Game Player, 48-G Ridge Road, Greenbelt, Maryland 20770.

© M.L. Prosize 1983

ILLUSTRATED HERE is a portion of an advertisement that appeared in a trade paper over a year ago. It shows the screen for the "Munchkin" Videocade that was never officially produced due to problems with Atari. Most unfortunate, as you can see that it is a much better representation than Atari's.



We do have a few sample copies of this cartridge, called "MUNCHER" available for subscribers only at \$30 ppd. If there are any left by the next issue, I may increase the price...

Dale Low
3020 Cook St.
Victoria BC
V8T 3S9
CANADA

```

1 B=20237;FOR A=0TO 34;%(A+B)=*(A);NEXT A
2 S=1;O=0;` ;M=0;N=750
3 C=20244;D=20251
5 CLEAR ;GOSUB 200;T=2
50 %(C)=-9999
60 P=5;NM=3;X=-70;Y=30;CX=-70;CY=40;PRINT #0,M," "
70 FOR A=1TO 2
80 IF &(23)=8X=X+A;Q=90;N=N-2
90 IF &(20)=8X=X-A;Q=90;N=N-2
100 IF &(21)=16Y=Y+A;Q=150;P=P+AB2;N=N-3
105 NEXT A
106 CX=0;CY=40;PRINT #0,P," ",CX=60;PRINT #0,N
107 IF &(23)=1;NT=7;M=M-50;MU=80;NT=0;GOTO 60
110 Y=Y-1;P=P-1
111 IF RND (13-ABS(0))=1X=X+K
112 IF N<1CX=-30;CY=20;PRINT "OUT OF FUEL!";IF KPGOTO 2
115 FOR NU=QTO 40;NEXT NU;Q=40
120 IF (Y>35)+(Y<-32)+(X>70)+(X<-75)GOTO 60
140 %(D)=ABS(Y-40)b256+X+76
150 CALLB;%(C)=%(D)
170 IF (PX(X,Y-9))+(PX(X+12,Y-9))GOTO 320
180 GOTO 70
200 H=0;NT=0;BC=0;FC=180
201 R=-35;S=S+1
205 O=RND (17)-9;K=(O>0)b5-(O<0)b5
206 IF K>5K=5
207 IF K<-5K=-5
210 FOR A=-80TO 79;LINE A,-44,0;LINE A,R,1
220 IF R>-10R=R-3
230 IF R<-40R=R+3
240 R=R+RND (7)-4
250 IF A<50IF A>-70IF H=0IF R>-15H=A
260 NEXT A
261 CX=-20;CY=40;PRINT #0,"WIND:",0;FOR A=1TO 500;NEXT A
262 CY=40;CX=-20;PRINT " "
300 IF H=0H=RND (99)-50
301 &(10)=0;BOX H+10,0,30,40,2;BOX H+10,-30,30,20,2
302 CX=H+2;CY=-25;PRINT #0,S;TV=98
303 BOX H+10,-30,30,20,3;&(10)=176;RETURN
320 IF (P<2)+(P>7)GOTO 329
321 IF X>H-3IF X<H+13GOTO 350
329 TA=55;VA=12;FOR A=1TO 15;BOX X+4,Y-2,A,A-3,1
330 NEXT A;FOR A=1TO 15;BOX X+4,Y-2,A,A-3,2;NEXT A
331 ` ;M=M-500;GOTO 50
350 ` ;NT=7;MU=83;MU=40;MU=72;MU=83;NT=0
355 U=(9-ABS(H+8-X))b4
360 CY=25;CX=-30;PRINT "WELL DONE!!";CX=-33;PRINT #0,"BONUS:",P,"b",U,"b",S
370 CX=-35;PRINT "<FUEL BONUSa",#0,(8-T)bPbSb2
371 N=N+(8-T)bPbSb2
380 FOR A=1TO 999;NEXT A
390 BOX 0,15,120,30,2;M=M+PbUb5
400 CY=40;CX=-70;PRINT #0,M;T=T-1;GOTO (T#0)b55+5

```

```

0 INPUT %Z;GOTO 19
3 %U)=M;%O)=N;%(U)=130;%(BC)=130;CALLZ;RETURN
4 %U)=129;%(BC)=129;%(U)=A;%(O)=B;CALLZ;%(U)=E;%(O)=F;CALLZ;%(U)=I;%(O)=J;CALL
Z
5 %U)=128;%(BC)=128;%(U)=C;%(O)=D;CALLZ;%(U)=G;%(O)=H;CALLZ;%(U)=K;%(O)=L;CALL
Z;RETURN
8 FOR Y=-65TO 65STEP 32;BOX Y,30,9,10,2;NEXT Y;RETURN
9 @(Xb9+T)=1;BOX -97+Tb32,30,9,9,3;RETURN
19 CLEAR ;CY=0;PRINT "PLYRS ?
20 W=KP-49;IF (W<0)+(W>3)GOTO 19
40 FOR X=0TO W;FOR Y=0TO 6;@(Xb9+Y)=0;NEXT Y;@(Xb9+7)=3;@(Xb9+8)=1;NEXT X;BOX 0,
31,160,10,1;NT=1;M=-Z;N=0;GOSUB 3
100 FOR X=0TO W;IF @(Xb9+6)NEXT X
110 FOR T=0TO W;IF @(Tb9+6)NEXT T;GOTO 950
120 IF X>WGOTO 100
130 GOSUB 3750;GOSUB 8;FOR T=1TO 5;IF @(Xb9+T)N=2540+Tb32;GOSUB 3;GOSUB 9
150 NEXT T;BOX 0,-9,160,70,2;FOR Y=14TO -34STEP -10;BOX 0,Y,160,1,1;NEXT Y;FOR Y
=-75TO 75STEP 8;BOX Y,-6,3,56,2;NEXT Y
170 BOX -1,24,154,1,1;BOX -1,-36,154,1,1;FOR T=0TO @(Xb9)c25;BOX RND (150)-75,19
-RND (5)b10,RND (8)+4,3,1;NEXT T
300 A=-Z;B=5376+RND (159);C=-Z;D=7936+RND (159);E=-Z;F=10496+RND (159);G=-Z;H=13
056+RND (159)
320 I=-Z;J=15616+RND (159);K=-Z;L=18176+RND (159);M=-Z;N=21016+RND (30)b4
400 FOR P=36TO 41;@(P)=RND (3b@Xb9+8))+6;NEXT P;GOSUB 3;M=N;FOR S=100TO 0STEP -
2;Y=43-Nc256;Q=RM-79
510 IF N<796GOTO U
520 IF PX(Q,Y)GOTO Z
530 IF PX(Q+4,Y)GOTO Z
540 IF PX(Q,Y-6)GOTO Z
550 IF PX(Q+4,Y-6)GOTO Z
600 B=B-@(36);D=D+@(37);F=F-@(38);H=H+@(39);J=J-@(40);L=L+@(41)
620 IF B<5376B=5535
630 IF D>8095D=7936
640 IF F<10496F=10655
650 IF H>13215H=13056
660 IF J<15616J=15775
670 IF L>18335L=18176
680 GOSUB 4;A=B;C=D;E=F;G=H;I=J;K=L
700 IF JY(X+1)N=N-1024bJY(X+1);GOTO 750
710 IF JX(X+1)N=N+4bJX(X+1);GOTO 750
720 GOTO 900
750 MU=63;Y=Nc256;IF (RM)150)+(RM<0)N=M
760 IF N>21141N=M
800 GOSUB 3;M=N;MU=6
900 NEXT S;CY=-1;PRINT "TIME UP";GOTO Z
950 CLEAR ;FOR T=0TO W;CX=-45;PRINT #5,"PLYR",T+1,@(Tb9);NEXT T
960 IF TR(1)GOTO 19
970 GOTO 960
3750 CY=43;CX=-65;PRINT #0,@(Xb9+7);CX=-35;PRINT "PLYR",#3,X+1,#8,@(Xb9);RETURN
3850 @(Xb9)=@(Xb9)+S;RETURN
3950 GOSUB 8;FOR T=1TO 5;@(Xb9+T)=0;NEXT T;@(Xb9+8)=1;GOTO 0
20258 CX=-10;CY=-1;PRINT "SPLAT";@(Xb9+7)=@(Xb9+7)-1;FOR T=0TO 99;BC=40;NEXT T;B
C=20275;IF @(Xb9+7)=0@Xb9+6)=1
20265 NEXT X;IF X>WGOTO 100
20268 FOR T=1TO 5;IF N=2540+Tb32GOSUB 9;M=-Z
20270 NEXT T;FOR T=1TO 5;IF @(Xb9+T)NEXT T;GOTO 3950
20271 @(Xb9+8)=@(Xb9+8)+1
20272 GOSUB 3850;GOSUB 3750;GOTO U

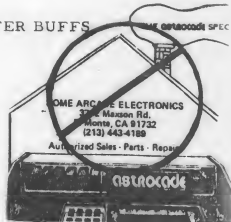
```

Mike Skala
544 E. Overlook
Eastlake OH 44094

HOME ARCADE ELECTRONICS

has MOVED

We are now CPU ELECTRONICS
2972 S. 6th St. Suite C
Klamath Falls, OR. 97603
503-884-3225



We will continue to offer the friendly, reliable service than you got from HOME ARCADE but now we are able to offer you an expanded computer line including ZGRASS, NEC, Commodore, ColecoVision, SpectraVideo.

We do not charge for shipping.

We gladly accept Master Card and Visa orders.



We repair Video Games -- Bally/Astrocade, Atari, ColecoVision, Oddessey Game and Hand Controls.....\$69.95 (includes parts and shipping)

We carry all the latest releases for Astrocade including:

Sneaky Snake by New Image.....\$30.00
M's. Candyman by L&M Software.....\$30.00
Blast Droids by Spectrecade.....\$30.00
Treasure Cove by Spectrecade.....\$30.00

COMPAR E Our Prices

#6004 - Astrocade Basic (2000 Baud).....\$19.95
#BP1500 - Astrocade Unit w/basic + 3 Game Carts.....\$149.95
#2015 - Pirates Chase.....\$20.50
#2017 - The Incredible Wizard.....\$27.95
#HEI-1005 - 12 ft. Ext for Hand Control (by Wico).....\$ 9.95
#HEI-1008 - Sanyo Slim Model 5 Cassette Recorder.....\$39.95
#HEI-1009 - Data Tapes w/Hard Styrene Cases.....10 for 9.95

CPU Electronics is having a SPECIAL O V E R S T O C K SALE!!

On SALE for \$10.00 each are these Astrocade Game Cartridges:

#2004 - Brickyard/Clowns	#2005 - Star Battle
#2007 - AstroBattle	#2012 - Space Fortress
#2014 - Grand Prix	#3001 - Baseball
#3002 - Football	#4002 - Lettermatch
#5001 - Amazin Maze	#6002 - Bally Basic (300 B)

Also available are GRAE BAGS for cassette games--3 Games for \$15.00 (Wavemakers, L&M, Esoterica, New Image)

Order by mail or call (503) 884-3225 for COD or Credit Card orders.

Computer owners we now offer a 24 hour on line computer for your enjoyment if you have a modem try dialing it up. 300/1200 baud, 8-bit word, 1 stop bit, parity disabled. (503)883-3735

CARTRIDGE SEA DEVIL



Copyright 1983 Bit-Fiddlers
Distributed by L&M Software

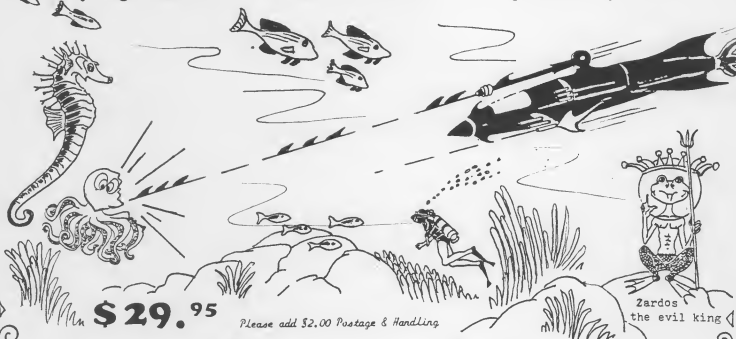
You are the guardian of a 21st century undersea farm. Not only is this important to the survival of the people on earth but the company you work for have risked millions on this venture.

Zardos, the evil king of a distant planet, needs this food for himself and has sent android divers with other sea creatures to steal this food.

You are provided with the under sea hi-tech. sub-surface cruiser, Sea Devil, equipped with the latest in sonar screens. You can spot targets at great distance. As they come into range your laser makes quick work of the poachers and accumulate valuable sub credit points for yourself.

Zardos personally is commanding a submarine which will fire cluster bombs to keep you at bay.

Can you get Zardos in his sub? He's worth 1,000 points if you can.



\$29.95

Please add \$2.00 Postage & Handling

L&M

SOFTWARE 8599 FRAMEWOOD DR.

NEWBURGH, IN. 47630

You may also call in your order - - 1-812-853-6895 from 8:AM to 11:PM CST.

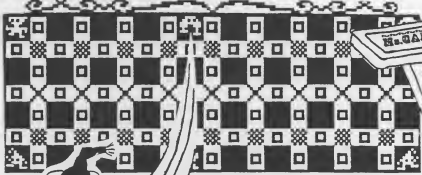
Ms. CANDYMAN

CARTRIDGE

ASTROCADE



You keep track of disappearing goblins on the radar screen



Beautiful music



\$29.95

Please add \$2.00 Postage & Handling

Real arcade action with joysticks, 1 or 2 players and 3 levels of difficulty. More than 20 screens, each faster than the one before. Full screen display in exquisite detail. Ms. Candyman must pick up all of the lifesavers as quickly as possible while avoiding contact with the Ghosts & Goblins. During the first half of a screen the Ghosts or Goblins will try to catch you. During the 2nd half of a screen the Ghosts or Goblins will take up protective positions to keep you away from the life savers. Each contact costs Ms. Candyman 1 life and she will nose-dive head first off the bottom of the play field. A wrecker or ambulance will carry her off.

We accept Mastercard, Visa and COD orders. We also accept checks or money orders thru the mail.

L'M

Call 812-853-6895

SOFTWARE 8599 FRAMEWOOD DR. NEWBURGH, IN. 47630

Ms. Candyman is one of the most refined games ever produced for the Astrocade. It's an original concept as you can see from the game screen above. We are absolutely sure you will be more than satisfied.

Order both cartridges, Ms. Candyman & Sea Devil, at the same time and save \$2.00 postage and handling charges on Ms. Candyman.

CREDIT CARD NUMBER			
<input type="text"/>			
Month	Tr.	INTERBANK NO.	
EXPIRATION DATE			
Signature _____			
Name _____			
Address _____			
City _____		State _____	Zip _____



CREDIT CARD CUSTOMERS

ORDER BY
PHONE



VISA

CHARGE-IT On Your
VISA or Master Charge

\$1.00 OFF when you
Call in the order COD, MC-VISA
1-812-853-6895 9AM-9PM CST

L'M

SOFTWARE

8599 Framewood Dr. Newburgh IN.47630

ADS This space is available for free ads - anything having to do with the Arcade. I'd prefer them to come typed, 78 characters per line maximum, 4 lines maximum, so that all I have to do is cut and paste.

With all the sales going on; now is a good time to pick up those Videocades you don't have - they may be the collector's items of the next century...

This little filler identifies some of the normal contents of a few of the memory locations:

ASTRO BASIC MEMORY MAP FOR VARIABLES

%(20002)-%(20052)= A THROUGH Z

%(20054)=BC	%(20066)=MO	%(20078)=VC
%(20056)=FC	%(20068)=TH	%(20080)=NM
%(20058)=NT	%(20070)=TE	%(20082)=VA
%(20060)=CX	%(20072)=TC	%(20084)=VB
%(20062)=CY	%(20074)=VR	%(20086)=NV
%(20064)=XY	%(20076)=VF	%(20088)=RM

I'd like to take this opportunity to wish you all the best of the Holiday Season, and good fortune in the next year.

The ARCADIAN
Robert Fabris, a-munching
3626 Morrie Drive
San Jose, CA 95127

the SOURCE TCD 959

FIRST CLASS
U S POSTAGE
PAID
Sunnyvale, CA
Permit No. 931

Jan 27, 1984

ARCADIAN

Vol 6 No 3

REPORTING ON THE CONSUMER ELECTRONIC SHOW I spent a couple of days at the CES in Las Vegas earlier this month, looking at the various manufacturers' displays, as they try to sell their wares to the distributors and dealers in the country. This is where buyers from Macy, K-Mart, Nieman-Marcus, Sears, and the local stereo store, etc., place orders for the next year's delivery of all kinds of electronic goodies. The big things were the new Kodak portable TV camera/recorder at 5 pounds and 1800 dollars. This machine is styled in a fashion similar to most TV cameras. Also seen (but weren't operating) were mockups by Sony and by Fisher of a camera/recorder about the size of a big Nikon 35mm camera. They use the same size 8mm recording tape as the Kodak item, but with a separate recording unit --- lots of game companies are now making their games in many formats to broaden their selling base. --- Vending machines that will change the game in your cartridge (Atari, Commodore, etc) to something else for one or two bucks. --- The laser disc/game combination will expand. Bally was showing the Sega "Astron Belt" game that has a computer-generated foreground where you play the game while the background is taken from the scenes on a laser disc. In another format, there is a game built like a tree where you start the adventure at the trunk, and your decisions cause you to move out one or another of the branches. All the possible plots are stored on the disc and it blacks out for a second as the laser searches for the next plot segment. This cartoon-type system has been seen in the Arcades already.

CORRECTION to the Astrocade telephone number of last month - the area code should be 614.

STAND ALONE KEYBOARD ADDITION We have all moaned about the difficulty we have in entering programs using the Arcade's keypad. As mentioned last month, there have been a number of schemes, but none were apparently reliable in their operation, or had some 'bug' that would keep them from performing all the required functions. I was about to supply schematics of some of these ideas, in case someone wanted to try their hand at solving the problems. But this became unnecessary as one of our hardware suppliers is about to present us with a complete keyboard system that will finally give us the convenience of a typewriter-sized input mechanism. We have seen the keyboard before, on page 174 of Vol 5. Yes, the keyboard will be produced by Alternative Engineering, as a component part of the Zgrass System. They will provide the 81 key keyboard which includes a numerical keypad, the 8048 microprocessor with 1K ROM decoder, plus a coil cord to plug into a new Basic cartridge that will have the ability to accept the keyboard inputs as well as the traditional cassette interface. This can be considered the first step to the full-blown Zgrass system, as compatibility is built-in.

TROUBLESHOOTING PROGRAMS will be undertaken by the following gentlemen. If you have been having difficulty with any of our programs, you have a couple of alternatives - Contact the author, whose address I usually place near the listing, or contact one of these volunteers:

P. Potter 704 Northwest Ave., Union, IA, 52175
K. Lill 6608 Soyhe Campbell, Chicago, IL, 60629
M. Carlson PO Box 2205, La Habra, CA 90631-1405

STANDARD OPERATING PROCEDURE here is to load an incoming program from tape, use the attached listing in case there is a problem in loading, and then run the program. We don't have the time to try all possibilities available in a program, and so there may be some 'glitchrs' or 'bugs' in the program. We then print the program out of the Arcade unit for inclusion in the Newsletter. We are always interested in programs, and we occasionally have a contest as discussed on p.11. We have enough programs now for a contest next month, and I expect that issue be closer to the middle of the month.

BLUE RAM / PRINTER CONTROL system is now available from George Moses (P.O. Box 686, Brighton, MI 48116, for \$15. This taped program will type everything in a program, leaving proper spaces, replacing lower case symbols with proper characters, and includes all arrays. I hope to have my NEC working with it for the next issue.

ATTENTION--NEW AND OLD BLUE RAM USERS

Perkins Engineering has moved, and is under new management. The new management has been the manufacturing facility of Perkins Engineering for some years.

We hope to have the transitional period change completed shortly, with a full line of Blue Ram devices and services.

16-K AND 32-K BLUE RAMS NOW BEING SHIPPED

The Blue Ram by Perkins Engineering has already opened the door to hundreds of creative programmers who love the powerful graphics and sound capabilities in the Astrocade, but were dismayed by its lack of random access memory (RAM). No more! Now, instantly, you can have up to 32768 bytes of additional memory.

You can use the Blue Ram to copy a game cartridge on regular cassette tape using the machine language routines included in the Blue Ram Utility program. Learn Z-80 machine code and modify an existing game cartridge! Write your own cartridge! And, with the 24 pin socket on the Blue Ram you can adapt your computer to drive a modem, a printer, a keyboard and many other applications! Regular price is \$249.95. (32K model is \$369.95).

Blue Ram Extended Basic Cartridge

Written by Jay Fenton and John Perkins to take advantage of the Blue Ram's exclusive input and output ports, hardware and software switching mechanisms, and the Astrocade's outstanding game and graphics design capabilities. With 16K Blue Ram it gives up to 15,500 bytes of programming space (total 32K). With 32K Blue Ram total 32K is 31,864), with special POINT, CIRCLE and SNAP commands, 4 colors, built-in math routines, keyboard and printer-driving logic, 300 baud or 2000 baud data output and much more! Will not operate without a Blue Ram or other extended memory. Regular price is \$49.95.



SPECIAL OFFER!

**New 16K Blue Ram and the
Extended Basic Cartridge
a \$300.00 value**

\$275

New 32K Blue Ram & Extended Basic Cartridge, \$395



The Blue Ram Keyboard! A 62 key typewriter style assembly mounted on wooden end blocks and fitted with a 3 foot cable to plug into the Blue Ram 24 pin socket. Bally's command words are added to the keys. Price assembled and tested is \$89.95. 4300 W. 194 St., Cleveland, OH 44135. Phone (216) 676-0603, Joe Poelking. When ordering specify whether you have 300 baud Bally Basic or 2000 baud Astrocade Basic.



**PERKINS
ENGINEERING**

THE GAME PLAYER

... goes on the offensive in

COSMIC RAIDERS Astrocade # 2019

"Warning! Warning! Enemy space fighters spotted on radar!" screamed the Lieutenant.

"Engage maximum thrust," ordered the Captain, as their Cosmic Raider space craft burst forward at warp speed. Glancing down at the radar, a chill of fear struck deep within, for there one could see a vast and rapidly approaching force of Battle Cruisers and Kamikaze ships.

"Range ... 1000 and closing. Sir, scanners have identified fighter craft as those of Larkin," reported the Lieutenant as he energized the proton torpedoes.

The Captain flinched slightly, then turned and said, "Maintain course and speed. The evil Larkin must be destroyed. An example of our power shall be made."

Little did the bold Captain and his brave Lieutenant know that they were merely bytes of memory in a ROM chip, parts of a new and exciting video game by a company called Astrocade. (Sorry gang, had to end the story somewhere.) But you can carry on and be your own Captain in this one to four player game, which very much resembles and plays like the coin-op DEFENDER.

In COSMIC RAIDERS, the player(s) can maneuver his ship up or down, fly toward the right or left, and control his speed also. Fast speed has a great sound effect of full thrusters. For that matter, all the sound effects are quite good, and received praise from all our players.

The "playing field" of the game is almost the entire television screen. At the bottom is a mountainous landscape, which passes by rapidly as you fly across the screen. Below that is a radar screen, that shows the exact positions of all moving objects on both sides of the non-visible playing area. It is very well designed, and an indispensable aid to the player(s).

Each player has a choice of a skill level, 0-9, and number of ships, 1-9. Bonus ships can be won, but never more than nine at one

time. The goal, if you have not guessed by now, is to shoot down all of the many types of fighters, bombs, and Kamikaze ships before they get you. Doing so allows one to proceed to the next sector, to do it all over again. Each sector is more difficult. However, there is one object called an "Energy Star" which periodically floats across the screen. If your ship passes into it, you will be protected by an invincible force field for about ten seconds. You may use them anytime you wish, or save them for later.

At higher levels of play, some of the enemy fighters will fire at you from behind, and some of the Kamikaze ships will actually chase you, and I mean right on your tail, too! COSMIC RAIDERS is another fine game from Astrocade. It was designed and programmed by Bob Ogdon, and developed by Action Graphics. It should provide some good fun for players of all ages. We really like it.

SCOREBOARD

Cartridges:

Bally Pin I	320,430*	Don Gladden
Bally Pin II	336,700	Stan Kendall
Wizard (Skill 1)	453,200	Stan Kendall
Ms. Gandyman (Skill 1)	111,177	Mike Prosiase
Pir. Chase (Skill 1)	1,942,443	Mike Prosiase
Pir. Chase (Skill 9)	705,284*	Peggy Gladden
Space Invaders	7,045	Stan Kendall
Muncher	69,000*	Melinda Mullen
Solar Conqueror	18,871*	Lloyd Friedman
Sea Devil	177,850*	Eric Allen

Cassettes:

Dungeons of Dracula	3,440	Al Showalter
Exitor	31,575	Fred Olivas
Yahtzee (2 player)	348	Peg Williams

* New high score (As of 1-6-84)

WANTED: Your opinions and comments on any cartridge or cassette game(s). Is the game fun? Or, is it a waste of money? Is it challenging, or too easy? Etc. These opinions will be included in future game reviews so that we may better provide an accurate appraisal of a particular game. If enough people respond, we may even forward the results directly to the game's manufacturer.

When you submit your high score on a game, please include the skill level. Send your scores, questions, comments to: Game Player, 48-G Ridge Road, Greenbelt, Maryland. 20770

© M.L. Prosiase 1984

NEED MORE MEMORY?

WE HAVE LOWERED THE PRICES ON OUR 64K RAM TO ROCK BOTTOM. THEY WON'T GO ANY LOWER, EVER.

THE "BARE BOARD" WITH MANUAL IS NOW \$80.00

NEED PARTS TOO? THE "KIT" INCLUDES ALL THE PARTS EXCEPT RAM'S AND POWER SUPPLY FOR ONLY \$150.00

WANT US TO ASSEMBLE AND TEST IT? WE'LL EVEN PUT IN 4K OF RAM FOR \$185.00

DEALER INQUIRIES INVITED. GROUP PURCHASE DISCOUNTS ARE ALSO AVAILABLE.

R & L ENTERPRISES
2901 WILLENS DR.
NORTHLAKE, ILLINOIS 60164
312-455-7066
SOURCE ST1959

GOLDDIGGER INSTRUCTIONS:

GOLDDIGGER is a game of strategy and LUCK for one player. Type the program from the listing and PRINT SZ. If you have no errors you should see 1452. Enter the DATA statements in direct mode being very careful to include the !s and commas. Save to tape using :PRINT or for auto start use %(!6D2E)=27195; %(!6D30)=13;:PRINT %(!6000),2000 Either way :INPUT will load.

In playing GOLDDIGGER you are a miner searching for gold nuggets far below the surface. Some nuggets may just be picked up but to get others you will have to "blast your way in". You have 10 explosive charges. To use one to blast away a section of earth just HOLD the joystick in the direction of the section in your way and pull the trigger. If the joystick is not positioned, the explosion will take away one of your three miners! When the charge detonates, the earth will shake and several chunks will fall. You don't want one to fall on your miner! Use strategy in placing your explosives. Don't use them unless you must. They are very unstable and once in a while one will go off where you didn't want it to. A miner may carry as many nuggets as he wishes but to get credit for them you must send him to the "Bank". Move the miner to the left of the yellow box containing the number of "miners left". Move the joystick forward and the nuggets will be exchanged for money and will register as score. You will also be given 5 new explosive charges (max. of 10 at any one time). When you have cleared a screen, go to the bank and a new screen will appear. If you have only one explosive charge left the screen will turn red as a warning to head for the surface. If you have to use the last charge an alarm will sound meaning you have only about 20 seconds to get to the bank and press the joystick forward. If you don't make it you lose a miner! When a miner is "killed" a cross appears at the site. Your next miner may pick up the cross and get all the gold the unfortunate one was carrying. At \$5000 a new miner will be awarded. Joystick #1 moves the miner and places the charges in any of the eight directions. The trigger detonates the blasts. Any key replays. Good prospecting!!

Vd. 6 No. 3
Jan 27. 1984

```

1 .GOLDIDGER
2 .BY DAVE CARSON
3 .P.O.BOX 39, KIPTON, OHIO—44049
4 .(216) 774-4645
10 CLEAR :FA=127;FB=128;BC=4
20 DATA I,3,0,0,10,930,900,910,920,0,0,0,t(?)=-1;t(10)=196
40 B=0;FOR A=-77TO 75STEP 8:e(B)=A:B=B+1:NEXT A:B=20;FOR A=34TO -38STEP -6;e(B)=A:B=B+1:NEXT A
49 IF R=0CLEAR
50 CF=SM,BOX -40,46,80,8,7;CX=-64;CY=48;PRINT " GOLDIDGER!";C=44;CY=47;CF=L.;PRINT "$",#0,0
51 BOX 35,46,6,5;CX=35;CY=46;CF=SM.;PRINT #0,I;CF=L.
53 L=10;GOSUB 64
55 GOTO 300
60 IF JY(1)#RETURN
61 L=L+5;BC=4;IF L>10L=10
64 IF T=Q+T;CX=50;CY=47;PRINT #0,Q;T=0
65 IF Q=5000I=I+1;CX=35;CY=46;CF=SM.;PRINT #0,I;CF=L.:G5=15662
66 RETURN
70 IF L=0RETURN
71 MU="0";R=R-1;BOX D,E,8,6,4
75 RETURN
80 SHOW D,E,2,N;RETURN
100 G=X+D;H=E+Y;IF L=0RETURN
102 IF RND (35)=10D;H=E
105 FOR A=ITO 4:PLAY{(!IFD7);SHOW G+1,H,2,P;SCROLL 0,2,160,100,1
110 SCROLL 0,2,160,100,-2;SCROLL 0,2,160,100,1
115 NEXT A;BOX G,H,8,6,4
116 IF G=DIF H=E:GOSUB 250;RETURN
117 GOSUB 200;RETURN
120 FOR V=0TO 30;MU="X";GOSUB 620;MU="X";NEXT V;GOSUB 80;GOTO 250
200 FOR V=ITO 20
210 J=RND (19);K=RND (12)+20;IF PX(e(J),e(K))=2IF PX(e(J)+1,e(K)-6)=0BOX e(J),e(K),8,6,4;BOX e(J),e(K)-6,8,6,4
230 NEXT V:L=L-1;IF L=1BC=80
231 IF L=0GOSUB 120
232 RETURN
240 G5=20045;RETURN
250 I=I-1;IF I<1CY=0;CX=-27;PRINT "GAME OVER";e(34)=0;IF e(35)<0e(35)=0
251 IF I<1CY=-10;CX=-66;PRINT "TODAY'S HIGH SCORE IS:";CX=-15;PRINT "$",#0,e(35);IF KP:GOSUB 240;RUN
255 S=D;U=E;BOX S,U,8,6,4;PLAY{(!FBD);SHOW S,U,2,M;e(33)=T;T=0
260 CX=35;CY=46;CF=SM.;PRINT #0,I;CF=L.;L=10;BC=4;GOTO 600
300 FOR A=-77TO 90STEP 8;FOR B=0TO -46STEP -6
310 C=RND (6);IF C<2BOX A,B,8,6,4
320 IF C#2BOX A,B,8,6,6
330 IF C=3BOX A,B,8,6,4;SHOW A,B,2,0;R=R+1
340 NEXT B;NEXT A
350 GOTO 600
400 BOX D,E,8,6,4;MU="0";T=T+e(33);S=0;U=0;GOSUB 80;RETURN
600 D=11;E=46
610 GOSUB 80
620 X=JX(I)b0;Y=JY(1)b6
630 F=0;IF PX(D+X,E+Y)<F=1
635 IF L<1GOTO 645
640 IF PX(D+1,E-1)=IT+10;GOSUB 70;GOSUB 80
645 IF D=27IF E=46GOSUB 60;IF R=0FOR V=0TO 1000;NEXT V;BC=4;GOTO 49
646 IF L<1GOTO 700
650 IF TR(1)GOSUB 100
655 IF PX(D,E-2)=1GOSUB 400
660 IF PX(D,E)=2GOTO 250
700 IF FSHOW D,E,2,N;D=D+X;E=E+Y;SHOW D,E,2,N
710 IF L=0RETURN

```

EXTENDED BASIC

800 60T0 620
900 A2345678901234
910 A2345678
920 A234567890123456
930 A2345678901234

~~~~~

```
ENTER THESE DATA STATEMENTS:
DATA >900!,5!,5!,C!,3F!,C0CC!,C!,C0F3
DATA >910!,4!,4!,5514!,515
DATA >920!,8!,6!,0!,3033!,C00F!,F03C!,C00F!,3033
DATA >930!.5!.5!.0!.4!.4055!.4!.4
```

©1984, R. Fabris

ABC HOBBYCRAFT'S

## astrocade/UNDERGROUND

(812) 477-9661

2155 E. MORGAN, EVANSVILLE IN. 47711

ABC wants the ASTROCADE UNDERGROUND to continue growing. The movement is now larger than ever. There are more cartridges out now than ever--with some very Promising games to come. You can help the underground grow. Send for our free catalog. It list all games currently available as well as the latest news. If your friends have Astrocades tell them about us. We will send them a catalog too.

Every issue of the Arcadian we like to have a "super special". This month we have a good one. You can get (with any other Purchase) a Galactic Invasion, #2811, for the incredibly low Price of \$4.95. Enjoy this fantastic space Game at an amazing Price. This Price, as well as our other sale Prices, will remain in effect until our inventory is depleted.

Thanks go to all of our customers who took advantage of our Wavemakers Super Sale. We regret that we can no longer offer sale Prices on the Castle of Horror and Pack-Rat special.

Remember, we have all of the latest games. Sea Devil, Sneaky Snake, Ms. Candyman, and Treasure Cove just to name a few. Call for the latest information on all of the newest Games.

We are now stocking C-10 blank cassettes. These are handy for storing all of your Astro BASIC creations (\$1.00 each--three for \$2.50--ten for \$7.00). We also have some Parts available such as transformers, RF modulators and many other Parts.

We hope that we can serve you well in the coming year. We are not a fly-by-night outfit. ABC has been in the hobby business for thirty eight years. We would be more than happy to take your order any day but Wednesday (we need a day off too). For those of you who cannot wait to Place an order, feel free to take advantage of our 24-hour order line.

ABC HOBBYCRAFT

# ABC HOBBYCRAFT - ASTROCADE PRICE LIST - PRICES EFFECTIVE 1 8 84

| ASTROCADE VIDEOCADES      |       |
|---------------------------|-------|
| 2001 280 Izzap/Dodgem     | 24.95 |
| 2002 Seawolf/Missile      | 24.95 |
| 2003 Red Baron/Panz. Att. | 29.95 |
| 2004 Brickyard/Cloons     | 29.95 |
| 2005 Star Battle          | 24.95 |
| 2009 Astro Battle         | 29.95 |
| 2010 Dogpatch             | 29.95 |
| 2011 Galactic Invasion    | 4.95  |
| 2013 Space Fortress       | 29.95 |
| 2015 Grand Prix/          |       |
| Demolition Derby          | 29.95 |
| 2016 Pirate's Chase       | 29.95 |
| 2017 Incredible Wizard    | 34.95 |
| 2018 Solar Conqueror      | 34.95 |
| 2019 Cosmic Raiders       | 34.95 |
| 3001 Baseball/Tennis/     |       |
| Hockey/Handball           | 29.95 |
| 3002 Football             | 29.95 |
| 3005 Astrocade Pinball    | 29.95 |
| 4001 Speed/Bingo Math     | 19.95 |
| 4002 Letter Match/Spell   |       |
| 'N Score/Crosswords       | 29.95 |
| 4004 Biorhythm            | 29.95 |
| 5001 Amazon' Maze/        |       |
| Tic-Tac-Toe               | 24.95 |
| 5002 Blackjack/Poker/     |       |
| Acce-Deucey               | 29.95 |
| 5005 Artillery Duel       | 34.95 |
| 6004 Astrocade BASIC with |       |
| built-in interface        |       |
| Regular price:            | 59.95 |
| Special sale price:       | 29.95 |
| Astrocade DEMO (limited   |       |
| availability)             | 29.95 |

## INDEPENDENT CARTRIDGE SOFTWARE

|                                    |       |
|------------------------------------|-------|
| Muncher (limit. edition)           | 34.95 |
| Treasure Cove (Esoterica)          | 32.95 |
| Blast Droids (Esoterica)           | 32.95 |
| Machine Language Manager           |       |
| (Bit Fiddlers)                     | 54.95 |
| Ms. Candy Man (L&N)                | 29.95 |
| Sneaky Snake (New Image)           | 32.95 |
| SEA DEVIL                          | 29.95 |
| ABC HOBBYCRAFT                     |       |
| 2155 E. MORGAN AVENUE              |       |
| EVANSVILLE, IN. 47711              |       |
| 24-HOUR ORDER LINE: (812) 477-9661 |       |

## INDEPENDENT TAPE SOFTWARE

(All items ASTRO BASIC only unless otherwise noted...)

| BIT FIDDLERS                |       |
|-----------------------------|-------|
| GoldFish Demo (both BASICS) | 5.00  |
| Chicken! (both BASICS)      | 12.95 |

## L&N SOFTWARE

|                              |       |
|------------------------------|-------|
| #1 Claim Jumper/             |       |
| River City Gambler           | 12.95 |
| #2 Cosmic Saucer Battle/     |       |
| The Black Lagoon             | 12.95 |
| #3 Bombardier/Meteoroid      | 12.95 |
| #4 Target/Mind Bender        | 12.95 |
| #5 Search & Destroy/         |       |
| Air Raid                     | 12.95 |
| #6 Star Base 2000/           |       |
| Space Quest 2001             | 12.95 |
| #7 Phantom Star Fighters/    |       |
| Space Checkers               | 12.95 |
| #8 Crazy Ball/               |       |
| Ayatollah Dart Board         | 12.95 |
| #9 The Mummy's Treasure/     |       |
| Galactic War 2002            | 12.95 |
| #10 Coyote-Roadrunner Desert |       |
| Race/Atom Smasher            | 12.95 |
| #11 Sink the U-Boat/         |       |
| Rescue Air Drop              | 12.95 |
| #12 Mission: Impossible/     |       |
| 3-D Tic-Tac-Toe              | 12.95 |
| #13 The Fox & the Hare/      |       |
| Space Sleuth                 | 12.95 |
| #14 Alien Invasion I & II    | 15.95 |
| #15 Secret of Pellicular     | 15.95 |
| #16 Exitor's Revenge         | 15.95 |
| #17 Nautilus                 | 15.95 |
| #18 Candy Man                | 15.95 |

## HAUNAKERS

|                              |       |
|------------------------------|-------|
| Max (Robot from Space)/      |       |
| Horse Race                   | 15.95 |
| Clue/Flying Ace              | 15.95 |
| Maze Race/Obstacle Course/   |       |
| Space Chase                  | 15.95 |
| Slot Machine/Ferversion      | 15.95 |
| Music Composer/Yahtzee       | 15.95 |
| Mouse in the Hat/Speed Math/ |       |
| Note Match                   | 15.95 |
| Guitar Course/Tune/          |       |
| Progressions                 | 15.95 |
| Backgammon/Obst. Course      |       |
| Tournament                   | 15.95 |
| Pack-Rat I & II              | 15.95 |
| Lookout for the Bull         | 15.95 |
| Whiz Quiz (trivia)           | 15.95 |
| Castle of Horror/            |       |
| Four Famous Freebies         | 15.95 |
| Monkey Jump/Gong the kong    | 15.95 |
| Collision Course             | 15.95 |
| Character Analysis           | 15.95 |
| Dungeons of Dracula          | 15.95 |
| L.T. (Little Terrestrial)    | 15.95 |
| Gate Escape                  | 15.95 |

## HARDWARE & ACCESSORIES

|                             |       |
|-----------------------------|-------|
| Hand controllers (pair)     | 54.95 |
| (each)                      | 27.95 |
| Replacement hand controller |       |
| cords (with molded plug)    | 2.50  |
| 12 ft. hand controller      |       |
| extension cord (each)       | 7.95  |

★★★★★★★★★★★★

## ORDERING INFORMATION

Orders taken by mail or phone on 24 hour order line. (Call late nights and weekends and save money!) NO COLLECT CALLS ACCEPTED!  
Add \$1.50 (\$2.50 in Canada) to total for shipping/handling. Shipments may be prepaid or CDD \$1.65 CDD fee added to CDD orders. (No CDD to Canada...) VISA & MasterCard accepted. (Be sure and give your card # and expiration date when ordering.) We ship UPS (preferred) or U.S. Mail. (U.S. mail only to Canada.)

CALL OUR  
24 hour  
ORDER  
LINE:  
(812)  
477-9661

astrocade

Jan 27 1984

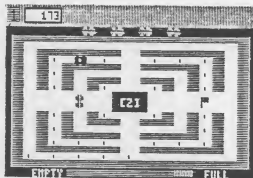
ARCADIAN

Vol. 6 No. 3

# EXTENDED MEMORY PRODUCTS REVIEW by Dave Carson

Before getting into this month's featured software, COLLISION COURSE in E.B. from MAVEMAKERS, I have a couple of announcements to pass along. First of all, thanks for all the reader response. I appreciate hearing from you and I will answer your extended memory questions to the best of my ability. Secondly, in response to the requests for reviews of specific items, I can only do them as I receive them. Finally, those of you who have written to PERKINS ENGINEERING recently and haven't gotten the answers you expected due to illness, please watch this column in the next couple of issues. I am expecting to hear from John Perkins soon and will then be able to provide the information you need.

COLLISION COURSE in E.B. is one of those few game programs that might best be described as a "classic" for our system. It is fashioned after the coin-op, HEAD-ON. Practically every computer or game system boasts of at least one version of this game.

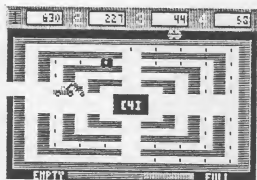


The cassette is packaged in the traditional MAVEMAKERS style. The instruction sheet is folded in such a way to display the title and accompanying illustration through the top of the box. The documentation is complete and easy to understand with notes on tape loading and troubleshooting. The game accommodates from one to four players, chosen by knob # one at the completion of the load.

The gameboard is a rectangular maze of four lanes of dots with lane openings North, South, East, and West. The top of the screen keeps track of player data. "Pit road" where the remaining cars are parked is just below the scoreboard. The infield displays the number of the current screen or level. At the very bottom is the all important fuel gauge. Each player is given five cars at the beginning of the game. A bonus car is awarded for earning 1000 points. Your car moves through the maze in a clockwise direction picking up dots for points by passing over them. A computer controlled car is on the track moving in a counter-clockwise direction. The object is to clear the track of all the dots in order to go on to the next screen. You must avoid collision with the computer car by changing lanes. This is accomplished by steering with the joystick at the lane openings. When changing lanes, care must be taken not to collide with the walls. Your car may move one or two lanes at the openings depending on the length of time the joystick is held. The fuel supply is constantly being depleted as you drive.

Increasing speed also increases fuel consumption. Each player's turn continues until a crash occurs with the computer car or a wall, or the fuel gauge reaches empty. Checkered flags appear occasionally on the track. Passing over one of these flags will add to both your fuel supply and your point total.

When a crash occurs at any location on the screen, your car spins wildly amid a burst of circular shock waves. A tow truck will come on to the track from the left side. The truck will go to the location of the wrecked car, pick it up, and tow it off the left side of the screen. When



a screen is completed, the tow truck will also make an appearance. Bonus points are awarded for completion of a screen. The bonus begins at 50 and increments by 25 points per level. The tow truck tows the bonus points across the screen.

The game is fairly easy to play in the first four levels. Patterns can be established to clear the dots. Beginning with level five, you can throw away any patterns you've been using and start over! Road blocks appear at the bottom of the screen and travel upwards as the game progresses. Hitting one of these results in a crash. If you finally master level five, you will find the road blocks on six moving much faster. The game does not allow boredom! The farther you go the more challenge it offers.

COLLISION COURSE in E.B. is a game for nearly everyone. It features full color and sound effects along with playability that is addictive (Betcha can't play it just once!) and challenging. The E.B. version has everything that the A.B. tape has (w. GAME PLAYER Vol. 5, issue 9) and much more. The recommendations from here are that it is a "must" addition to your game software collection. The program runs in a 4k or larger system.

As can be seen from the screen pictures included, I have achieved four color representation in my screen dump to printer routine. Now, any screen in BASIC can easily be printed.

A s.a.s.e. will insure an answer to your letters. Any products using or creating external memory on the BALLY system that you have for sale and would like to have appear in this space should be sent with full documentation. It should be sent to me in the exact format that a customer would receive it. If the item is software and there is a specific screen that you would like to have illustrated, let me know and I will try to get it to paper.  
DAVE CARSON P.O.Box 39 KIPTON, OHIO 44849  
(216) 774-4645  
FOR U.P.S.: 389 State Street

# Ms. CANDYMAN

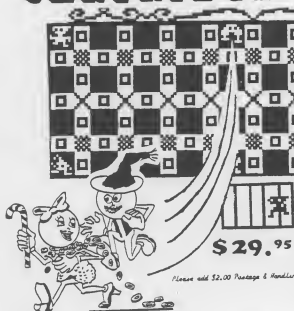
## CARTRIDGE



You keep track of disappearing goblins on the radar screen



Beautiful music



\$29.<sup>95</sup>

(Please add \$2.00 Postage & Handling)

Real arcade action with joysticks, 1 or 2 players and 3 levels of difficulty. More than 20 screens, each faster than the one before. Full screen display in exquisite detail. Ms. Candyman must pick up all of the lifesavers as quickly as possible while avoiding contact with the Ghosts or Goblins. During the first half of a screen the Ghosts or Goblins will try to catch you. During the 2nd half of a screen the Ghosts or Goblins will take up protective positions to keep you away from the life savers. Each contact costs Ms. Candyman 1 life and she will nose-dive head first off the bottom of the play field. A wrecker or ambulance will carry her off.

We accept Mastercard, Visa and COD orders. We also accept checks or money orders thru the mail.

# L'M

Call 812-853-6895

SOFTWARE 8599 FRAMEWOOD DR. NEWBURGH, IN. 47630

# CARTRIDGE

# SEA DEVIL

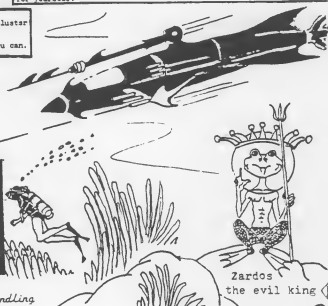
You are the guardian of a 21st century undersea farm. Not only is this important to the survival of the people on earth but the company you work for have raised millions on this venture.

Zardos, the evil king of a distant planet, needs this food for himself and has sent android divers with other sea creatures to steal this food.

You are provided with the under sea hi-tech, sub-surface cruiser. Sea Devil, equipped with the latest in sonar screens. You can spot targets at great distances. As they come into range your laser senses quick work of the poachers and accumulate valuable sub credit points for yourself.

Zardos personally is commanding a submarine which will fire cluster bombs to keep you at bay.

Can you get Zardos in his sub? He's worth 1,000 points if you can.



\$29.<sup>95</sup>

Please add \$2.00 Postage & Handling

# L'M

SOFTWARE 8599 FRAMEWOOD DR.

NEWBURGH, IN. 47630

ADS

Astrocade unit complete with 2 joysticks and the Bally Basic cartridge only \$75. I will ship P.P. when cashier's check or money order received. I have only 12 units to sell. R. Moore, 21638 park Rock Lane, Katy, TX 77450

Brand New Bally-Astrocade Home Computer Units, with 2 controllers and Basic Cartridge \$75. Complete line of cartridges from Astrocade \$5. each John Capra, c/o General Appliances, 232 Edgewood Ave., Thornwood N.Y. 10594 914-769-6662, pm

For Sale 5002, \$10; 2004, 2012, 3001, 3002, 3005, \$15. each; 2017, \$25. All have manuals except 2012. K. Brenden 3347 N. Jackson Ave., Rosemead, CA, 91770

30

The ARGADIAN

Robert Fabris, reporting  
3626 Morrie Drive  
San Jose, CA 95127

the SOURCE TCD 959

|                                                                         |
|-------------------------------------------------------------------------|
| FIRST CLASS<br>U. S. POSTAGE<br>PAID<br>Sunnyvale, CA<br>Permit No. 931 |
|-------------------------------------------------------------------------|

# EXPANSION NEWS on two fronts by Alternative Engineering.

1. The first bit of news has to do with the barebones keyboard. While there have been a number of inquiries for a spartan keyboard that just replaced the on board keypad, when push came to shove, the serious people, ones with cash in hand, also wanted to have expanded memory as well. They reasoned that 1800 bytes just wasn't enough to do any serious programming. So AE will produce a keyboard with RAM, 64K of it, along with the 8048 microprocessor, two RS-232 ports for printer functions, etc., the 8K Vipersoft Basic language, and a power supply - all in a cabinet. Also included is a cassette machine so that all owners will be assured of taped program compatibility.

2. The Zgrass unit will include as standard, the latest in disc technology - the 96tpi Double Side Quad Density drive now available. All other features of the system remain unchanged.

Alternative Engineering is to be commended for continuing their efforts, not visible to the rest of the world, but certainly full of frustrations in dealing with suppliers, financiers, and everyone else involved in putting together projects such as these.

PRICES for the above are \$495. for the Keyboard Expansion; and \$1495 for the Zgrass Unit. Orders with money order, cashier check, etc., are now being accepted, with units being built on a first-in, first-out basis, and delivery in a 6-8 week timeframe.

It should be noted that the Keyboard Addition is easily expanded to the Zgrass unit by plug-ins, because the motherboard, power supply, and cabinet are common to both. There will be some advertising and/or further data in the next issue.

**GRAVITY** You command the first fleet of interplanetary space probes. You launch them from aboard your command post on the space shuttle Enterprise. All probes are capable of hovering over any planet at 2000 feet (except Pluto) and each can escape back into space to perform gravitational tests elsewhere. The probes, however, cannot escape from the gravity and heat of the Sun. All probes that enter the solar atmosphere for tests will disintegrate, but not before sending you the data you seek. You are left, upon disintegration, with a scene of the night sky from a telescope on your space shuttle. Since you have an unlimited supply of probes, the disintegration of a few should not concern you. Begin with a probe on Earth, for reference.

Instructions: Load the program and the \* array. You will see the night sky, then your exhaust, a map of the solar system with the Sun on the left, then a menu. After you choose a planet, the map reappears, and the scene shifts to the planet's surface with the probe at 2000 feet elevation. The probe will drop a weight and the adjacent clock will time its descent. Then the menu will reappear for further testing.

In actuality, this program is a segment of a larger program that will eventually explore our solar system. Readers are encouraged to develop similar 'chapters', each within the 1800 byte storage constraint, and we'll see if we can't develop a multi-loaded program, or something that could be put on a cartridge.

```

1 CLEAR ;NT=0;NM=2;NV=25;BC=0;FC=7;FOR S=0TO 120;BOX RND (160)-80,RND (80)-40,
1,3;NEXT S;IF A=48A=0;GOTO 20
2 P=-27;CY=30;CX=P;PRINT " GRAVITY";CY=P;PRINT " FRED RODNEY 1984";CY=0
4 A=47;NT=9;FOR N=0TO 15;MU=*(N);NEXT N;NT=70;MU=90
5 GOSUB 79;FOR N=255TO 255STEP -1;NV=N;BOX -4,3,Nc20,Nc20,3;NEXT N;GOSUB 25
20 Z=0;CY=-40;PRINT ;CX=P;PRINT "1.EARTH";CX=P;PRINT "2.THE MOON
22 CX=P;PRINT "3.MERCURY";CX=P;PRINT "4.VENUS";CX=P;PRINT "5.MARS";CX=P;PRINT "6
.JUPITER";CX=P;PRINT "7.SATURN
23 CX=P;PRINT "8.URANUS";CX=P;PRINT "9.NEPTUNE";CX=P;PRINT "0.THE SUN";BC=7;FC=0
;A=KP;IF (A<48)+(A>57)GOTO 20
25 CLEAR ;GOSUB 70;FOR L=1TO 1500;NEXT L;CLEAR ;&(9)=50;IF A=47BC=0;FC=7;GOTO 40
30 FC=8;CX=-38;CY=24;IF A=48G=2;PRINT " THE SUN=28
31 IF A=49G=22;BC=167;PRINT " EARTH=1
32 IF A=50G=57;BC=0;FC=7;PRINT "THE MOON=0.16
33 IF A=51G=43;BC=22;PRINT "MERCURY=0.28
34 IF A=52G=24;BC=71;PRINT " VENUS=0.85
35 IF A=53G=37;BC=51;PRINT " MARS=0.38
36 IF A=54G=13;BC=54;PRINT " JUPITER=2.6
37 IF A=55G=20;BC=44;PRINT " SATURN=1.2
38 IF A=56G=22;BC=19;PRINT " URANUS=1.1
39 IF A=57G=18;BC=4;PRINT " NEPTUNE=1.4
40 BOX -4,1,1,1,1;BOX -4,3,3,3,1;BOX -8,2,1,1,1;BOX 0,2,1,1,1;IF A=47GOTO 65
42 FOR L=-15TO 0STEP 15;BOX 31,L,2,1,1;NEXT L;LINE -80,-30,4;LINE 79,-30,1;LINE
79,-40,4;LINE 0,-30,1;LINE -80,-40,1
43 CY=0;CX=37;PRINT " _2000";PRINT " SEC.";CX=43;PRINT "FEET";GOSUB 68;NM=2
50 FOR Y=-1TO -29STEP -1;BOX -4,Y,1,1,3;FOR B=0TO G;Z=2+1;NV=456cG;NEXT B;CY=0;P
RINT #5,Zc60;BOX -4,Y,1,1,3;NEXT Y;GOSUB 68
50 IF A=48NT=6;FOR L=1TO 8;MU=90;MU=65;BOX -4,3,15,8,3;NEXT L;NT=0;NM=2;FOR L=
1TO 31STEP 2;NV=255cL;BOX -4,3,L,L,3;NEXT L;RUN
55 ;GOSUB 68;GOSUB 79;GOTO 20
58 NT=2;FOR N=1TO 5;MU=90;BOX -4,3,1,1,3;MU=65;NEXT N;NT=0;RETURN
70 &(9)=68;BC=87;&(0)=0;&(1)=0;&(2)=5;&(3)=5;NT=0
72 BOX -52,0,3,3,1;BOX -40,0,5,5,1;BOX -27,0,5,5,1;BOX -29,5,1,1,1
74 BOX -17,0,3,3,1;FOR L=-40TO 40STEP 8;BOX RND (4)-8,L,1,1,1;NEXT L
76 BOX 10,0,10,10,1;BOX 28,0,8,8,1;LINE 22,5,4;LINE 34,-6,3
78 BOX 46,0,6,6,1;BOX 63,0,6,6,1;BOX 75,0,1,1,1;CX=30;CY=-33;PRINT "MAP";GOTO A+
32
79 FOR L=1TO 700;NEXT L;RETURN
80 CLEAR ;Z=36;FOR L=67TO 105;&(9)=L;NEXT L;GOTO 30
81 BOX -27,0,3,3,3;RETURN
82 BOX -29,9,1,4,3;RETURN
83 BOX -52,0,1,1,3;RETURN
84 BOX -40,0,3,3,3;RETURN
85 BOX -17,0,1,1,3;RETURN
86 BOX 10,0,6,6,3;Z=14;RETURN
87 BOX 28,0,6,6,3;RETURN
88 BOX 46,0,4,4,3;RETURN
89 BOX 63,0,4,4,3;RETURN

```

Fred Rodney  
1190 Albany Ave  
Brooklyn, NY 11203

\*(0)=108 \*(3)=77  
\*(1)=71 \*(4)=83  
\*(2)=108 \*(5)=108

\*(6)=108 \*(9)=73 \*(12)=108 \*(15)=85  
\*(7)=79 \*(10)=79 \*(13)=108  
\*(8)=77 \*(11)=85 \*(14)=108



## THE GAME PLAYER

... jumps over pits  
& climbs vines in ...

- 1) Adventure, &  
Night Bombers  
ASTROGAMES Tape A2

The second release from the new Canadian software company Astrogames is a pleasant departure from the usual game fare.

ADVENTURE, which is actually a multi-adventure game, is similar in concept to PITFALL, a popular game by Activision for the Atari unit. The second game on tape A2, NIGHT BOMBERS, is a more traditional "shoot-em-down" type of game. Both games are for one player only.

The object in ADVENTURE is to maneuver your man from the left side of the screen to the right. The first part of the game is called "The Forest", and each screen presents a new and different set of obstacles to hurdle. The joystick is used to move left and right, climb and jump. There are no "creatures" to avoid or beware of, however, your man must jump over crevasses, climb hanging vines, jump from stone to stone, and land on an occasional moving stone which will then transport him to the other side.

The player is allotted 1000 seconds to play in "The Forest", during which there is no limit to the number of new screens he can challenge. The quicker the player is at completing each screen, the more points he will have at the close of the 1000 second "Forest" sequence. Sometimes bonus point treasures will appear hanging from the vines.

After completing "The Forest", the player will begin a new adventure, called "Maze A-Changing Walls".

In this adventure, you will be faced with maneuvering your man from one side of the maze to the other, with the added element of a constantly changing formation, or position, of the maze walls. Most of the time you are simply walled in, unable to move. Fortunately, you are permitted seven "eats". That is, by pulling the trigger, the wall to your man's right will open. Points are awarded based on the amount of time used to complete the maze.

Upon finishing a couple of these mazes, the third and final adventure begins. This one is called "Maze B-Invisible". This maze game is like the other one, except that you cannot see the walls.

Overall, our players enjoyed ADVENTURE. It is challenging, though not really too difficult. Most felt it was relatively easy to play. We all felt that the graphics in the "Forest" segment were somewhat ordinary, and that an attempt should have been made to animate the "man". On the positive side, the sound effects were nicely done, and the music during the first tape load was excellent.

Astrogames used the multi-load method for ADVENTURE. In other words, the tape is loaded at three different times into memory. However, you only need to :INPUT; RUN G0 once, at the beginning. The computer will print out commands at the appropriate time when you must push PLAY on your recorder. Using the multi-load method does require one to rewind the tape and start over for a replay of the game.

NIGHT BOMBERS is the other game on tape A2, and comes in an easy and hard version. "Easy" gives the player five lives, while "Hard" gives you only three lives, plus faster game action.

This is a fairly routine sci-fi game, in which bomber planes fly overhead, and periodically drop a bomb on your city. You, the player, control a missile launcher, and try to intercept the falling bombs.

We cannot, in all honesty, describe NIGHT BOMBERS as a terribly exciting game to play. Young players, age 10 and under, would probably be most satisfied playing the game. Sound effects are minimal, but fair in quality.

Five hits on the city and the game ends. The knob controls the angle at which your missile is fired, and the joystick guides it.

The hard version is extremely difficult to play. We do not like the fact that the missile is so tiny you lose track (sight) of it as it rises. It needs to be much larger.

Tape A2 is selling for \$4.00, and is an appropriate price. Most players will find ADVENTURE an interesting game, and the more enjoyable of the two. There is a lot that could be done to enhance ADVENTURE if it could be released in an Extended Basic version, or better yet, a cartridge! It's a pretty neat game, and we think most of you will like it, too.

**MAIL BAG:** Craig Conner writes to say that he thinks "the column (Game Player) is great and enjoys reading it. It helps in making future choices." Craig's favorite tape is "Look out for the Bull". Herb Matthews writes to say "thanks for the consistent high quality and informative nature of your monthly reviews. It has definitely influenced my software purchases..." Herb loves Super Slope and feels it would be terrific as a cartridge. Joe Adams reports that there might be a program flaw in Cosmic Raiders. Upon reaching the 50,000 point level, the score will start back at 0. Does Joe have a defective cartridge? If you know the answer, please drop us a line.

Well, I think I've taken up enough of the space in this month's Arcadian. Will save some letters for next month. Bye.

© M.L. Prosis 1984

**astrocade/UNDERGROUND**

So many people responded to our sale last month that we decided to run a similar sale again this month. We still do have a few Galactic Invasion cartridges left(#2011). We are selling this popular game for the amazingly low price of \$1.95 a savings of 28.00. We are offering similar savings on the Bally dealer demo. We are offering this limited edition cartridge for the same price of \$1.95. All that we ask is that you place a \$10.00 order.

We are continuing with the sale on L&M software. This month save on these great cassettes:

|                              |        |
|------------------------------|--------|
| Tape #3 Bombardier/Meteoroid | \$5.00 |
| Tape #4 Target/Mind Bender   | \$5.00 |
| Tape #16 Exiton's Revenge    | \$7.50 |

Again all of these games are available in the AstroBASIC format only.

Speaking of cassette games, we are currently offering C-10 Cassette Tapes at a very good price - ten for \$7.00 a savings of \$3.00.

We are also continuing the sale on Space Fortress and Football. You may order either or both of these classic games for the low price of \$12.95 each. That's a possible savings of \$34.00.

We still have several Astrocade units in stock. We are offering them for \$99.95 with the following cartridges: AstroBASIC, Galactic Invasion, Football, Pinball, and Dogpatch. That's \$179.95 worth of cartridges for no charge when you buy an Astrocade from us.

We appreciate the great response from our recent sales and we hope to continue to serve your Astrocade needs. Just write us or give us a call (any day except for Wednesday). We have all of the newest cartridges in stock. Some of the new games are some of the best games available for the Astrocade. Make sure that you try Ms. Candyman, Sneaky Snake, Muncher, Solar Conqueror, Cosmic Raiders, and Sea Devil. We currently have all of these fine games in stock. Be sure to order your favorites today.

ABC HOBBYCRAFT  
2155 EAST MORGAN AVE.  
EVANSVILLE, IN 47711  
(812) 477-9661

# ASTROCADE VIDEOCADES

|                                                 |       |
|-------------------------------------------------|-------|
| 2001 280 Izzap/Dodgem                           | 24.95 |
| 2002 Seawolf/Missile                            | 24.95 |
| 2003 Red Baron/Panz., Att.                      | 29.95 |
| 2004 Brickyard/Clovn                            | 29.95 |
| 2005 Star Battle                                | 24.95 |
| 2009 Astro Battle                               | 29.95 |
| 2010 Dogpatch                                   | 29.95 |
| 2011 Galactic Invasion                          | 44.95 |
| 2013 Space Fortress                             | 12.95 |
| 2015 Grand Prix/<br>Demolition Derby            | 29.95 |
| 2016 Pirate's Chase                             | 29.95 |
| 2017 Incredible Wizard                          | 34.95 |
| 2018 Solar Conqueror                            | 34.95 |
| 2019 Cosmic Raiders                             | 34.95 |
| 3001 Baseball/Tennis/<br>Hockey/Handball        | 29.95 |
| 3002 Football                                   | 12.95 |
| 3005 Astrocade Pinball                          | 29.95 |
| 4001 Speed/Bingo Math                           | 19.95 |
| 4002 Letter Match/Spell<br>'N Score/Crosswords  | 29.95 |
| 4004 Biorhythm                                  | 29.95 |
| 5001 Amazon' Haze/<br>Tic-Tac-Toe               | 24.95 |
| 5002 Blackjack/Poker/<br>Acey-Deucey            | 29.95 |
| 5005 Artillery Duel                             | 34.95 |
| 6004 Astrocade BASIC with<br>built-in interface | 59.95 |
| Regular price:                                  | 59.95 |
| Special sale price:                             | 29.95 |

Astrocade DEMO (limited  
availability) 29.95

## INDEPENDENT CARTRIDGE SOFTWARE

|                                            |       |
|--------------------------------------------|-------|
| Muncher (limit. edition)                   | 34.95 |
| Treasure Cove (Esoterica)                  | 32.95 |
| Blast Droids (Esoterica)                   | 32.95 |
| Machine Language Manager<br>(Bit Fiddlers) | 54.95 |
| Ms. Candy Man (L&N)                        | 29.95 |
| Sneaky Snake (New Image)                   | 32.95 |

SEA DEVIL 29.95

ABC HOBBYCRAFT  
2155 E. MORGAN AVENUE  
EVANSVILLE, IN. 47711  
24-HOUR ORDER LINE: (812) 477-9661

## INDEPENDENT TAPE SOFTWARE (All items ASTRO BASIC only unless otherwise noted...) BIT FIDDLERS

|                                                   |       |
|---------------------------------------------------|-------|
| Chicken! (both BASiCs)                            | 12.95 |
| L&N SOFTWARE                                      |       |
| #1 Claim Jumper/<br>River City Gambler            | 12.95 |
| #2 Cosmic Saucer Battle/<br>The Black Lagoon      | 12.95 |
| #3 Bombardier/Meteoroid                           | 12.95 |
| #4 Target/Mind Bender                             | 12.95 |
| #5 Search & Destroy/<br>Air Raid                  | 12.95 |
| #6 Star Base 2000/<br>Space Quest 2001            | 12.95 |
| #7 Phantom Star Fighters/<br>Space Checkers       | 12.95 |
| #8 Crazy Ball/<br>Ayatollah Dart Board            | 12.95 |
| #9 The Mummy's Treasure/<br>Galactic War 2002     | 12.95 |
| #10 Coyote-Roadrunner Desert<br>Race/Atom Swasher | 12.95 |
| #11 Sink the U-Boat/<br>Rescue Air Drop           | 12.95 |
| #12 Mission: Impossible/<br>3-D Tic-Tac-Toe       | 12.95 |
| #13 The Fox & the Hare/<br>Space Sleuth           | 12.95 |
| #14 Alien Invasion I & II                         | 15.95 |
| #15 Secret of Pellucitar                          | 15.95 |
| #16 Exitor's Revenge                              | 15.95 |
| #17 Nautilus                                      | 15.95 |
| #18 Candy Man                                     | 15.95 |

## NAVERMAKERS

|                                            |       |
|--------------------------------------------|-------|
| Max (Robot from Space)/<br>Horse Race      | 15.95 |
| Clue/Flying Ace                            | 15.95 |
| Haze Race/Obstacle Course/<br>Space Chase  | 15.95 |
| Slot Machine/Perfervision                  | 15.95 |
| Music Composer/Yahtzee                     | 15.95 |
| House in the Hat/Speed Math/<br>Note Match | 15.95 |
| Guitar Course/Tune/<br>Progressions        | 15.95 |
| Backgammon/Obst. Course<br>Tournament      | 15.95 |
| Pack-Rat I & II                            | 15.95 |
| Lookout for the Bull                       | 15.95 |
| Whiz Quiz (trivia)                         | 15.95 |
| Castle of Horror/<br>Four Famous Freebies  | 15.95 |
| Monkey Jump/Song the kong                  | 15.95 |
| Collision Course                           | 15.95 |
| Character Analysis                         | 15.95 |
| Dungeons of Dracula                        | 15.95 |
| L.T. (Little Terrestrial)                  | 15.95 |
| Gate Escape                                | 15.95 |

## HARDWARE & ACCESSORIES

|                                                         |       |
|---------------------------------------------------------|-------|
| Hand controllers (pair)                                 | 54.95 |
| (each)                                                  | 27.95 |
| Replacement hand controller<br>cords (with molded plug) | 2.50  |
| 12 ft. hand controller<br>extension cord (each)         | 7.95  |

\*\*\*\*\*

## ORDERING INFORMATION

Orders taken by mail or phone  
on 24 hour order line. (Call  
late nights and weekends and  
save money!) NO COLLECT CALLS  
ACCEPTED!

Add \$1.50 (\$2.50 in Canada) to  
total for shipping/handling.  
Shipments may be prepaid or  
COD \$1.65 COD fee added to COD  
orders. (No COD to Canada...)  
VISA & MasterCard accepted. (Be  
sure and give your card # and  
expiration date when ordering.)  
We ship UPS (preferred) or U.S.  
Mail. (U.S. Mail only to  
Canada.)

CALL OUR  
24 hour  
ORDER  
LINE:  
(812)  
477-9661

astrocade

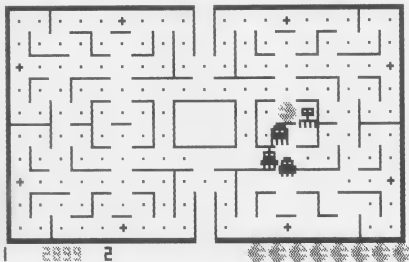
# MAZEMAN IS HERE!!!!

## AN ALL NEW MAZE CHASE ADVENTURE!!!

MAZEMAN is unlike any "gobble game" you have ever seen! Each time you clear a screen, you find yourself beginning a different maze. There are 12 completely different mazes, each requiring changes in tactics

Here's a game that will not offend the non-gamers in the family. It is completely quiet. That's right, quiet! The program is so tightly packed with great graphics, smooth animation, great colors, the most precise control you've ever seen, and exciting action, that there's no room for even a simple sound routine. The game play gets so intense that you won't even notice a lack of sound after a couple of screens. If you really want to, you can always turn on the radio or play your favorite records or tapes. It might even convert some of those non-gamers!!!

This newest cartridge game for the Astrocade system allows 1 to 4 players with only one joystick. You may program the number of Mazemen from 1 to 9. You set up each player's difficulty level from one to nine as well. The four bad guys get slightly faster and a bit more aggressive with each new maze. The mazes cycle after 12 but the increase in difficulty goes on and on. From level one through nine there are eight "Jekyll to Hyde" transformers per maze. After L.9 there are only four. Mazeman has challenge enough for the serious gamer, but will provide hours of satisfaction for the beginner.



**Actual Screen Print-out  
Player No. 1, Maze No. 2**

MAZEMAN is not Pac-Man or Muncher redone. Although the "eat the dots, avoid the enemies" scenario is similar, the game stands alone on it's own merit.

Treat yourself and your family to a very pleasant gaming experience. Send \$30.00 (U.S.) in check or MO (MO is faster) for your MAZEMAN cartridge.

I also do custom screen to printer dumps of any screen the astrocade unit can produce. For advertising or just as conversation pieces, send your specific wants with a S.A.S.E. for details.

### DEALER INQUIRIES WELCOME

I'm considering setting up "micro-system software", but for now order from:  
David Carson, P.O. Box 39, Kipton, Ohio 44049

**MAZEMAN** (c) 1984 DAVID CARSON

BY KEN LILL

A SERIES OF ARTICLES DESIGNED AS AN AID TO "BLUE RAM" EXPANSION UNIT OWNERS. ALTHOUGH MOST PORTIONS OF THIS COLUMN CAN BE APPLIED TO "UIPERSOFT BASIC", SOME MAY HAVE INFORMATION PERTAINING ONLY TO THE "BLUE RAM EXTENDED BASIC"

## USING THE 'OP' COMMAND

FINALLY, WITH THE HELP OF THE 'GREAT' GUYS AT R & L, DALE SMITH AND RUSTY BLONMART, I HAVE LEARNED THE SECRET BEHIND JOHN PERKINS' ELUSIVE 'OP' COMMAND!

TO DESCRIBE HOW ALL OF US PROGRAMMERS WERE INFORMED OF IT'S USAGE, I'LL TELL YOU. "IT IS A 'USER DEFINED' OPTION MADE TO ADD EXTRA COMMANDS TO THE BASIC. YOU MUST USE MACHINE LANGUAGE FOR THIS COMMAND!" BELEIVE ME, THIS SURE DIDN'T MAKE THINGS VERY EASY FOR US TO USE IT!

THIS IS WHAT YOU HAVE TO DO:

1. SET THE ADDRESS %(1600) <28108 FOR YOU DECIMAL TYPES OUT THERE> TO :C3 [195]
2. SET %(1600) AND %(160C) <28109 & 28110> TO THE ADDRESS THAT IS THE VERY FIRST BYTE OF YOUR MACHINE LANGUAGE PROGRAM (REMEMBER TO INVERT ANY NUMBERS THAT ARE NOT OPERATIONAL CODES!!!)
3. ENTER YOUR MACHINE LANGUAGE PROGRAM AT THE ADDRESS YOU HAVE SELECTED.
4. FINISH OFF THE PROGRAM WITH A 'JUMP TO !2460 [9312]

THIS COMPLETES THE 'INSERTION' OF THE NECESSARY MACHINE LANGUAGE. NOW ALL YOU HAVE TO DO TO GET YOUR ROUTINE TO WORK IS TO TYPE IN THE 2 LETTER COMMAND 'OP'. YOU DON'T NEED TO FOLLOW IT WITH A PERIOD OR A SPACE.

NOW TO EXPLAIN JUST WHAT YOU DID. THE FIRST COMMAND (<C3) IS JUST A JUMP, FOLLOWED BY THE ADDRESS TO JUMP TO. AT THE END OF THE PROGRAM, YOU NEED TO JUMP TO THE 'ON-BOARD' SUBROUTINE THAT EVALUATES THE NEXT BYTE IN YOUR 'BASIC' PROGRAM TO FIND OUT IF IT A SEMICOLON OR A 'GO'. IF IT IS NEITHER, IT WILL GIVE YOU AN ERROR MESSAGE.

\*\*\*\*\* REMEMBER \*\*\*\*\*

YOU MUST PUSH THE 'DE' REGISTER PAIR AS YOUR FIRST COMMAND TO SAVE THE ADDRESS THAT YOU ARE GOING TO RETURN TO IN YOUR 'BASIC' PROGRAM. THE LAST COMMAND PRIOR TO YOUR 'JP 2460' MUST BE A 'POP DE' COMMAND, SO THAT THE !2460 ROUTINE DOESN'T GET 'LOST'.

ANOTHER LITTLE HINT, 'REGISTER PAIRS' AF, BC AND HL MEAN 'NOTHING' TO YOUR 'BASIC' PROGRAM, SO THERE IS NO REAL NEED TO 'PUSH' THEM ONTO THE STACK IF YOU PLAN TO GO BACK INTO YOUR 'BASIC' PROGRAM. IF YOU THINK THAT IS PRETTY NIFTY, LET'S EXPAND THE USE OF THIS COMMAND BY 'LABELING' IT TO DO MORE

THAN ONE MACHINE LANGUAGE ROUTINE. THE WAY YOUR 'BASIC' COMMANDS MAY LOOK WILL BE ENTIRELY UP TO YOU AND YOUR PROGRAM. THE THING TO REMEMBER IS THAT EACH 'LABEL' MUST BE A 'VALID' NUMBER OR ARITHMETIC EQUATION ANY NUMBER OR EQUATION THAT CAN BE PLACED BETWEEN THE COMMAS IN A BOX ,LINE ,POINT , CIRCLE OR DATA COMMAND, PROVIDING THE ANSWER IS NOT LONGER THAN !FF [255], WILL WORK AS A LABEL, LIKE OP A+B-C. IF YOU USE A NUMBER FIRST, YOU DON'T EVEN NEED THE SPACE [OP]. LET'S SET UP A SAMPLE SET OF MACHINE CODE PROGRAMS, AND THEN WE'LL LABEL EACH OF THEM.

| ADDRESS | HEX | DESCRIPTION    |
|---------|-----|----------------|
| !7006   | 00  | NOP-DO NOTHING |
| !7007   | FF  | SYSGEN         |
| !7008   | 48  | PIZBRK         |
| !7009   | D1  | POP DE         |
| !700A   | C3  | JP NN          |
| !700B   | 60  |                |
| !700C   | 24  | 2460H          |
| !700D   | 00  | NOP            |
| !700E   | 06  | LD B,N         |
| !700F   | F0  | F0H            |
| !7010   | FF  | SYSGEN         |
| !7011   | 50  | PAWS           |
| !7012   | D1  | POP DE         |
| !7013   | C3  | JP NN          |
| !7014   | 60  |                |
| !7015   | 24  | 2460H          |
| !7016   | 00  | NOP            |
| !7017   | 06  | LD B,N         |
| !7018   | 28  | 28H            |
| !7019   | B5  | PUSH BC        |
| !701A   | FF  | SYSGEN         |
| !701B   | 50  | PAWS           |
| !701C   | B1  | POP BC         |
| !701D   | 10  | DJNZ           |
| !701E   | F9  | F9H            |
| !701F   | D1  | POP DE         |
| !7020   | C3  | JP,NN          |
| !7021   | 60  |                |
| !7022   | 24  | 2460H          |
| !7023   | 00  | NOP            |
| !7024   | CD  | CALL NN        |
| !7025   | CE  |                |
| !7026   | 3C  | 3CCEH          |
| !7027   | D5  | PUSH DE        |
| !7028   | 7D  | LD A,L         |
| !7029   | 87  | ADD A,R        |
| !702A   | 21  | LD HL,NN       |
| !702B   | 00  |                |
| !702C   | 70  | 7000H          |
| !702D   | 6F  | LD L,A         |
| !702E   | 5E  | LD E,<HL>      |
| !702F   | 23  | INC HL         |
| !7030   | 56  | LD D,<HL>      |
| !7031   | EB  | EX DE,HL       |
| !7032   | E9  | JP <HL>        |

NOW WE HAVE TO TELL THE COMPUTER WHERE EACH OP IS LOCATED. TYPE IN THIS INFORMATION.

NOW TYPE IN WITHOUT A LINE #:

```
FOR A=0 TO 6 STEP 2:PRINT #0,"%("A+!7000,;
INPUT ")="A+!7000):NEXT A
```

WHEN ASKED, TYPE IN THESE NUMBERS:

!7007  
!700E  
!7017

THIS IS WHAT IS HAPPENING:

LET'S ASSUME THAT YOU HAVE SELECTED 'OP 2'. THE FIRST THING IS THAT THE 'BASIC' ENCOUNTERS IT AND THEN IT DOES THE INSTRUCTION LOCATED AT THE ADDRESSES !6DCC-!6DCE. THAT IS TELLING IT TO JUMP TO !6070 !60703. THEN IT CALLS UP THE ROUTINE LOCATED AT !63CCE INSIDE OF THE BLUE RAM BASIC. THIS ROUTINE EVALUATES THE EXPRESSION THAT FOLLOWS THE COMMAND. THIS ROUTINE IS USED BY BOX, LINE, ETC. TO FIND OUT THE EXACT NUMBER OF THE EXPRESSIONS LIKE: A+B, A+B+100-RND(10) ETC. THIS WILL SKIP AUTOMATICALLY OVER ANY SPACES THAT YOU MIGHT HAVE PUT INTO THE EXPRESSION. IF YOU JUST HAVE 1 NUMBER, THAT IS YOUR ANSWER. THE 3 THINGS THAT WILL END AN EXPRESSION ARE (1) A 'GO', (2) A SEMICOLON AND (3) A COMMA. WHATEVER YOU DO, DON'T USE A COMMA IN THESE OPS! IF YOU DO, WHEN THE PROGRAM HITS IT, IT WILL BE EXPECTING ANOTHER MACHINE LANGUAGE PROGRAM THAT IS MEANT TO EVALUATE THE COMMA AND IT'S COMMAND. THIS IS NOT IN OUR MACHINE LANGUAGE PROGRAMS GIVEN HERE. AFTER THE EXPRESSION EVALUATION, I PUSH THE DE REGISTER PAIR. THE REASON BEING THAT THE DE PAIR NOW CONTAINS THE ADDRESS OF THE LAST BYTE IN OUR EXPRESSION. WE WANT TO SAVE THIS SO THAT WE CAN GO BACK TO THAT EXACT SPOT WHEN WE RETURN TO OUR 'BASIC' PROGRAM. THE HL PAIR CONTAINS THE ANSWER OF THE MATH. NOW WE WANT THE LOWER BYTE OF THE ANSWER, BECAUSE WE ARE ONLY USING NUMBERS IN THIS PROGRAM THAT ARE LOWER THAN !FF AS 'LABELS'. WE THEN LOAD THAT BYTE INTO 'A' OF THE Z80. NEXT WE DOUBLE IT BECAUSE IT TAKES 2 BYTES TO STORE OUR ADDRESS VECTORS! NOW WE PUT OUR LOWEST ADDRESS OF OUR 3 VECTORS INTO HL. THEN WE CAN DIRECTLY LOAD L WITH A TO 'ADD' OUR ANSWER. IF YOU START WITH AN ADDRESS THAT DOESN'T HAVE 2 0'S AT THE END, YOU'LL HAVE TO 'ADD A,L' HERE AND MOVE EVERYTHING DOWN ONE BYTE. DOING THIS WILL NOT EFFECT ANY OF THE JUMPS IN THESE PROGRAMS. NOW WE LOAD E WITH THE NUMBER IN THE ADDRESS POINTED TO BY HL. WE ADD 1 TO HL AND THEN WE TAKE AND LOAD D WITH THE NEXT BYTE OF THE ADDRESS. NOW WE 'SWAP' OR EXCHANGE DE WITH HL, SO THAT WE CAN JUMP TO THAT ADDRESS. IN OUR CASE, WE ARE NOW AT !617007. IN THIS ROUTINE, I CALL UP PIZBRK, WHICH IS A ROUTINE THAT CLEARS THE SCREEN, WAITS FOR A SWITCH, AND THEN RETURNS TO THE POINT WE CAME FROM. IT THEN EXECUTES THE NEXT COMMAND. THIS IS TO POP DE. THEN WE GO BACK TO 'BASIC'.

OP 1 GIVES US A PAUSE OF 140/60THS OF A SECOND. THIS IS 2 1/3 SECONDS. WE THEN POP DE AND RETURN TO BASIC. IN OP 2, PWS IS CALLED UP AGAIN. BUT THIS TIME IT'S ONLY FOR 40/60THS. BECAUSE BC IS PUSHED, WE CAN NOW POP IT, DO A DJNZ (DISPLACEMENT JUMP, NOT ZERO). WHAT THIS DOES IS DECREMENT BC AND CHECK TO SEE IF IT IS ZERO. IF NOT, JUMP TO THE POINT IN THE PROGRAM DESIGNATED BY THE

NEXT BYTE. BECAUSE THIS IS A DISPLACEMENT JUMP, THE JUMP WILL START FROM THE BYTE THAT GIVES YOU THE NUMBER OF BYTES, AND NOT FROM THE JUMP BYTE. WE THEN JUMP BACK TO THE PUSH BC COMMAND AND DO THIS ALL OVER AGAIN UNTIL BC=0. AFTER THAT, WE POP DE AND GO BACK TO OUR BASIC PROGRAM.

I HOPE YOU HAVE THE MAIN IDEA ON HOW TO USE THE 'OP' COMMAND WITH AND WITHOUT USING LABELS. UNTIL NEXT TIME!

**HAPPY PROGRAMMING!!**

KEN LILL  
6608 S. CAMPBELL  
CHICAGO, ILLINOIS 60629

(CONTINUED FROM P.49)

TO AVOID CONFUSION, A MENTION SHOULD BE MADE CONCERNING THE INDUSTRY-WIDE USE OF A "K" NUMBER IN THE NAME OF A PRODUCT. THE BARE ARCADE IS CONSIDERED TO HAVE 4K RAM. ONLY ABOUT 1.8K IS ACTUALLY AVAILABLE TO THE BASIC USER (MORE IN MACHINE LEVEL). A 16K BLUE RAM ALLOWS APP. 15.5K TO BASIC (AGAIN MORE IN MC). THE 48K ATARI 800, 38K, THE COMMODORE 64, 39K. BOTH THE LATTER ARE TRUE 64K MACHINES. THIS IS CONFUSING UNLESS YOU REALIZE THAT OPERATING SYSTEMS MUST HAVE RAM TO FUNCTION. IN THE CASE OF THE R&L 64K RAM BOARD, APP. 45K OF RAM MAY BE USED BY BASIC. ANOTHER 4K MAY BE USED FOR "SNAPS" IF PART OF THE ON-BOARD GAMES ARE DISPLACED. AN ADDITIONAL 4K CAN BE USED IF YOU HAVE A BETTER OPERAT. SYS. (EXPERTS ONLY!). FINALLY, IT IS POSSIBLE TO USE THE 8K CARTRIDGE AREA IF YOU HAVE A SPECIFIC USE (MIKE AND I HAVE BEEN USING THIS AREA WITH SCREEN DUMPS). ALL THIS EXTRA SPACE IS POSSIBLE BECAUSE OF THE WAY THE BOARD ACCEPTS THE RAM CHIPS. IN 2K INCREMENTS, THE ENTIRE MEMORY STRUCTURE OF THE ARCADE IS REPRESENTED BY CHIP SOCKETS AND ON-OFF SWITCHES. JUST INSERT RAM WHERE YOU WANT IT AND GO TO WORK (THE EXTENDED BASICS REQUIRE RAM TO BE PRESENT IN CERTAIN AREAS NOTED IN THE DOCUMENTATION THAT COMES WITH THE BOARD).

HAVE YOU SEEN THE "KEYS" IN MUNCHER? THEY EXIST, STARTING WITH THE 13TH SCREEN! IF YOU WANT TO CHEAT AND SEE THEM ALONG WITH THE INSANE SPEED AND SINGLE FLASH OF THE GHOSTS AFTER EATING THE POWER PILL, CHANGE THE NUMBER OF "MEN" FROM 3 TO HOW MANY YOU WANT (UP TO 255). LOAD TO EXTERNAL MEMORY AND CHANGE ADDRESS !607D (IF LOADED TO !6000 AREA, !807D IF LOADED TO !8000) FROM !03 TO ANY HEX NUMBER UP TO FF(255) AND PLAY THE GAME FOREVER!

LOOK FOR MY MAZEMAN CARTRIDGE AD THIS ISSUE. IT'S A REAL GOOD GAME (I DIDN'T WRITE IT, I'M SELLING IT).

ALL LETTERS INCLUDING A S.A.S.E. WILL BE ANSWERED.

SEND ITEMS FOR REVIEW TO:

DAVE CARSON  
P.O. BOX 39 (FOR UPS-309 STATE ST.)  
KIPTON, OHIO  
44849

# EXTENDED MEMORY PRODUCTS REVIEW

BY DAVE CARSON

FIRST OF ALL, THE NEW FORMAT THIS MONTH IS DUE THE FACT THAT I HAVE CHANGED WORD PROCESSING MACHINES. UNTIL NOW I HAVE BEEN USING MY ATARI 800 FOR THE COLUMN BECAUSE THE PROCESSOR FOR THE ARCADE WASN'T ALL THAT EFFICIENT. THANKS TO THE EFFORTS OF DON GLADDEN AND KEN LILL, ALL THAT HAS CHANGED. KEN SENT ME THIS ONE AND ALTHOUGH I'M NOT YET FULLY ACQUAINTED WITH IT'S FEATURES, I AM FINALLY EQUIPPED TO DO MY COLUMN ON THE MACHINE THAT I AM WRITING ABOUT! I DON'T KNOW FOR SURE IF IT'S AN AVAILABLE PRODUCT, WHEN I FIND OUT I'LL PASS ON THE INFORMATION.

THE WORD PROCESSOR WASN'T THE ONLY ITEM THAT WAS IN THE PACKAGE FROM KEN. HE ALSO SENT 'ARCADE GOLF' FROM GAMBIT'S SOFTWARE. KEN WROTE THE PROGRAM IN BLUE RAM EXTENDED BASIC 1.1 AND IT REQUIRES A SYSTEM LARGER THAN A 4K BLUE RAM TO OPERATE.

GOLF WAS FIRST MADE AVAILABLE TO THE ARCADE IN VOL.3, PAGE 46 OF THE ARCADIAN IN ASTRO-BASIC. THAT PROGRAM REMAINS ONE OF THE ALL TIME CLASSICS. IN VOL.5 I DID A SIMPLE CONVERSION TO E.B. ALL I DID WAS USE THE EXTRA MEMORY TO TIE UP LOOSE ENDS AND ADD A FEW FEATURES. KEN USED THE IDEA AND THE BASIC MECHANICS TO CREATE A FINISHED PRODUCT THAT HAS EVERYTHING. THE GAME PLAY MECHANICS AND THE GAME BOARD ARE SIMILAR, FROM THERE IT'S A WHOLE NEW BALL GAME.

THERE ISN'T MUCH YOU CAN CHANGE IN A COMPUTER GOLF SIMULATION AS FAR AS HOW YOU PLAY IT. YOU GET THE BALL FROM THE TEE TO THE HOLE IN AS FEW STROKES AS POSSIBLE. THE AREA OPEN FOR IMPROVEMENTS IS REALISM. THIS IS WHERE KEN REALLY WENT TO WORK!

THE GAME ACCOMMODATES 1 TO 4 PLAYERS USING ONE CONTROLLER AND PASSING IT, OR EACH PLAYER USING A CONTROLLER. YOU MAY CHOOSE TO PLAY 9 OR 18 HOLES. EACH HOLE IS DIFFERENT AND EACH 'COURSE' IS DIFFERENT AS WELL. THE FAIRWAY IS ON THE RIGHT SIDE OF THE SCREEN AND THE SCORE CARD AND DIRECTION 'CLOCK' IS ON THE LEFT. THE 'CLOCK' IS PRETTY MUCH THE SAME WITH JX CONTROLLING THE DIRECTION AND JY CHOOSING THE CLUB. THE STATUS INFO IS BETTER BECAUSE IT KEEPS TRACK OF EVERYTHING WITHOUT HAVING TO DISPLAY PLAYER SCORES BETWEEN HOLES. THE PLAY SIDE IS WHERE THE MAJOR IMPROVEMENTS LIE. THE SCREEN HAS MORE COLORS TO DISTINGUISH BETWEEN THE LAKE, TREES, SAND BUNKERS, AND THE GREEN ITSELF. YOU NOW HAVE A LITTLE GOLFER STANDING AT THE TEE, CLUB IN HAND, READY TO GO. WHEN YOU SHOOT, THE BALL DOESN'T ROLL ALONG LEAVING A TRAIL AS BEFORE. IT NOW FLIES. EVEN OVER THE HAZARDS IF YOU ARE CLOSE ENOUGH WHEN YOU HIT THE BALL.

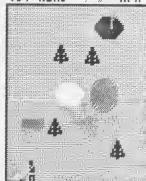
THE WIND ACTION IS MUCH MORE REALISTIC NOW. IT DOESN'T JUST PUT A SINGLE, PREDICTABLE, BEND IN THE BALL'S TRAVEL. IT CAUSES THE BALL TO CURVE, STOP SHORT, OR EVEN COME BACK AT YOU. THIS MAKES THE PLAY MUCH HARDER TO MASTER, PROVIDING A MORE COMPETITIVE GAME OF GOLF. THE 'SUNK' ROU-

TINE IS SOMETHING THAT MUST BE SEEN! I WON'T GIVE IT AWAY HERE. THE LITTLE GOLFER, BY THE WAY, MUST BE WALKED FROM THE TEE TO THE LIE POSITION OF THE BALL TO BE READY FOR THE NEXT SHOT.

KEN HAS LITERALLY LOADED THIS GAME WITH DETAIL, SOUND, COLOR, 'PLAYABILITY', REALISM, AND ENOUGH CHALLENGE FOR ANYONE. GOLF HAS ALWAYS BEEN ONE OF MY FAVORITE BASIC GAMES AND I THINK THIS ONE IS TOPS! YOU HAVE MY HIGHEST RECOMMENDATION TO BUY IT. THE PRICE HAS BEEN LOWERED FROM \$17.95 TO \$7.95. THIS IS A REAL VALUE FOR ANY ASTROCADE E.B. GAMER. ORDER FROM: KEN LILL, 6608 S. CAMPBELL CHICAGO, ILL., 60629

HOLE #2 PAR 4 660 YD. WIND: 1 20 MPH

| PLAYER'S | SCORES |
|----------|--------|
| PAR:5    | OVER   |
| 1 - 3    | -1     |
| 2 - 3    | -1     |
| 3 - 4    | 0      |
| 4 - 4    | 0      |



CLUB:1 WOOD

THIS SCENE SHOWS GOLFER #1 READY TO TEE OFF ON HOLE TWO. THIS PARTICULAR FAIRWAY HAS FOUR TREES, TWO SAND TRAPS (1 LARGE AND 1 SMALL), A LAKE, AND THE GREEN WITH FLAG.

IN EXPERIMENTING WITH R&L'S 64K RAM BOARD, MIKE AND I HAVE BEEN LEARNING QUITE A BIT. IN FACT, I'M NOW READY TO MAKE THE FIRST CONCRETE RECOMMENDATION. IF YOU ARE AN ADVANCED ARCADE USER WITH A BLUE RAM ALREADY, AND IF YOU ARE INTO OR THINKING OF GETTING INTO CARTRIDGE WRITING, THIS UNIT WOULD BE A VALUABLE PLUS. WITH THE PERKINS UTILITY IN THE !6000 TO !7FFF AREA, AND AN 8K CART TYPE PROGRAM IN THE !8000 TO !9FFF AREA, IT IS POSSIBLE TO 'TEST' THE GAME WITH NO HARM BEING DONE TO THE UTILITY. THIS ALONE SAVES AN UNTOLD AMOUNT OF TIME IN TAPE SHUFFLING. PARTLY BECAUSE OF WHAT WE HAVE LEARNED HERE, AND PARTLY DUE TO PRIOR KNOWLEDGE OF THE PRODUCT, KEN LILL HAS ALREADY PURCHASED, AND IS USING ONE. LOOK FOR SOME EXCITING NEW SOFTWARE FROM 'GAMBIT'S' IN THE FUTURE!

I FEEL THAT THE R&L BOARD IS A MUST FOR ADVANCED USERS. IN STATING THIS, I DON'T WANT TO DISCOURAGE OTHERS. AT THIS POINT, WE FEEL THAT THE PRODUCT CAN BE USEFUL TO ANYONE DESIRING EXTERNAL MEMORY ON THE ASTROCADE SYSTEM. I HAVE DETERMINED THAT BLUE RAM BASIC 1.1 EXECUTES WELL WITH THE BOARD AND THAT TAPE ACCESS WITH THE 300 BAUD INTERFACE IS FLAWLESS BUT SOMEWHAT SLOW AS WOULD BE EXPECTED.

WE NOW HAVE THE BOARD LOADED WITH THE FULL COMPLIMENT OF 64K RAM. MIKE HAS BEEN VERY BUSY WITH IT AND THERE SHOULD BE QUITE A BIT MORE TO TELL AS TIME GOES ON.

CONT. P. 48

For Sale: Astrocade w/ 6 controllers, A Basic, Cosmic Raiders, Ms. Candyman, BlastDroids, Muncher, Wizard, Artillery Duel, 17 other carts, 8 cassettes incl. Gate Escape, L.T., Skiing, and Exitor. Vol 5&6 Arcadian. Best Offer. (201)-993-4843  
M. Kronenberg Victory Hill East D-15 Dover, NJ 07801

WANTED: VIPER OR BLUE RAM EXPANSION WITH KEYBOARD AND MANUALS. Send description and photo to Allen Skaggs, 9421 Sunset Dr., Tampa, Fla. 33610, or call me @ (813-626-7345) 5 P.M. to 10PM is best. No Afro-engineering please.

BALLY ARCADE: INCLUDES 4 CONTROLLERS, B. BASIC, A. BASIC, E. BASIC AND MLM CART, VIPER EXPANSION (16K) WITH KEYBOARD. ALL ARCADIAN AND CURSOR NEWSLETTERS, PEEK N POKE, HACKERS GUIDE & Z80 MINICOURSE. FIVE CART & MORE - \$450 M.O. OR CERTIFIED CHECK  
JOHN M. OSTRATICKY JR. 106 JEFFERSON AV. BRENTWOOD, N.Y. 11717 (516) 231-4452.

*A really new kind of program, available NOW on cassette for the Astrocade (2000 Baud). You can learn the International Morse Code easily, without clumsy tapes to rewind over and over again, and without the high cost of an electronic trainer! Learn all the letters, the numbers, important punctuation. "Graduate" to MORSE CODE II for faster speed and to learn important messages like *Attention, Wait, Error, SOS* and more! The Trainer has 9 levels: 1. A, E, I, M, N, O, S, T, U 2. B, C, D, F, G, H, L, P, R 3. J, K, Q, V, W, X, Y, Z 4. All Letters 5. Numbers 6. Letters & Numbers 7. Punctuation: " ' - . / : ; ? 8. Numbers & Punctuation 9. Letters, Numbers & Punctuation *Together!* 3 speeds, a *Learn* and a *Test* mode (Tests may be open or closed book for 25 characters per test)! The easiest way to check your answers and *retest!* Test yourself at any speed and any level! Morse Code II has 3 levels: 1. Characters 2. Messages 3. All Codes (54), 2 speeds, a *learn* and *test* mode and 2 screen choices.*

Get both: MORSE CODE TRAINER and the advanced tutor, MORSE CODE II on one cassette.  
and: Complete documentation including a suggested 20 lesson program  
and: Program listings

Only \$900 Post-Paid, First Class Mail.

Send your check or money-order today to:

Fred Rodney, 1190 Albany Avenue, Brooklyn, New York 11203

Canadian Orders: Please add 1.00 for shipping. Please make checks payable in U.S. \$'s.

24-Hr C.O.D. HOTLINE (USA only) add \$1.75: (212) 629-2071

50

The ARCADIAN  
Robert Fabris, explorer  
3626 Morrie Drive  
San Jose, CA 95127

The SOURCE  
TCD 959

FIRST CLASS  
U. S. POSTAGE  
PAID  
Sunnyvale, CA  
Permit No. 931



KEYBOARD AND ZGRASS material was supposed to be here - actually a brochure they are making up that I was going to summarize - but it is still at the print shop as of press time. So the suggestion is that you contact the Alternative Engineering people at 1169 Outlet Rd., Hallowell, ME 04347 directly and get the brochure on both systems.

FOOTBALL CHALLENGE has been expressed by Bob Moore, 3419 Valle Vista, Chino Hills, CA 91710. "I feel that I can beat anybody on the Bally Football cartridge, and would like to extend a challenge to anybody living in my area. I am the 'greatest' on the Football cartridge!"

ASTROCADE WRITEUP in the March issue of Video Games magazine by Mark Brownstein. He writes about possible futures of the Astrocade machine. This must have been written sometime last year as I know some of the statements are no longer true.

LATE ASTROCADE NEWS On March 14, a final hearing was held in the Columbus court, and the plan for reorganization approved. This plan provided for the settlement of debts (not all at 100 cents on the dollar), and allows Astrocade to move ahead with their future plans. Only a few words are indicated in the plan - they will manufacture a unit in Korea, and look to foreign markets as well as the US market. One feature required will be a conversion chip to allow use on European tv sets. Rumor has it that a prototype machine will be shown at the Summer electronic show, and things will move ahead after that.

NEW MEMORY SAVER - THE ZEROPOWER RAM I don't usually write about non-Arcade products, but here is something to tease your imagination. Mostek now has a 16K RAM chip with a piggyback battery (MK48Z02). It won't forget its programming when the computer is turned off. Using CMOS technology, it is a pin-for-pin replacement for a 4016. Looking ahead - one can see a board game (chess) where all the piece locations are saved for another time - or mailed to your opponent. An adventure game that remembers where you are and your prizes. Suppose you invented a game on one of the extended memory systems, stored it in the chip, and sent it for review, comments from a buddy. One could put a ROM program on one chip in a cartridge, and store variable data used with that program on the new chip, also located in the cartridge.

PROGRAMS NEEDED for publication. Also printed material as well. There are three programs this month that are contest entries: Atlantis, Shoot the Duck, and Round Robin Utility. Except for Math Teacher, the others are reprints of ones that we had in earlier issues. Which means that I'm running out of material. Authors and programmers please note!!!

AND THE CONTEST WINNER IS "SHOOT THE DUCK"!!! George Moses, our Musicman, added a little rhythm to the tune that was provided, and also said that the flying duck could be speeded up by actually replacing some GOSUB statements with the routine spelled out at that location. (Having to find the subroutine prior to execution does slow down the Basic.)

```

1 .POLO
10 NT=0;@(5)=0;@(6)=0;FC=137;BC=5
15 T=301
16 CLEAR
20 FOR A=-67TO 67STEP 11;BOX A,-7,1,72,1;NEXT A
30 FOR A=-43TO 30STEP 9;BOX -1,A,133,1,1;NEXT A
35 BOX -1,-7,135,74,3;BOX -1,30,135,1,3
40 BOX -73,-7,12,19,1;BOX 72,-7,12,19,1
50 BOX -50,37,34,11,1;BOX -45,37,22,9,2;BOX 49,37,34,11,1;BOX 44,37,22,9,2
60 P=1;X=-60;Y=36;GOSUB 1000;GOSUB 2000;X=-72;Y=-7;GOSUB 1000;P=2;X=59;Y=36;GOSUB 1000;GOSUB 2010;X=71;Y=-7;GOSUB 1000
70 FOR A=1TO 8;X=-61+RND (10);Y=-39+RND (6);IF A<5GOSUB 2000
80 IF A>4GOSUB 2010
90 NEXT A
100 @(1)=-6;@(2)=5;@(3)=-21;@(4)=6;FOR P=1TO 2;X= @(P);Y= @(P+2);GOSUB 1000;NEXT P
110 P=1
120 Z=0;B=-61;IF P=2B=60
200 D=RND (6);BOX -25,36,9,9,2;BOX -25,36,9,9,1;BOX -25,36,7,7,2
220 IF D=1BOX -25,36,1,1,1;GOTO 300
230 BOX -27,38,1,1,1;BOX -23,34,1,1,1;IF D=2GOTO 300
240 IF D=3BOX -27,34,1,1,1;BOX -23,38,1,1,1
250 IF D=4GOTO 300
260 IF D=6BOX -25,36,1,1,1
270 IF D=3GOTO 300
280 IF D=6BOX -25,38,1,1,1;BOX -25,34,1,1,1
300 .
310 X=71;P=P+1;IF P=3P=1;X=-72
311 IF JY(P)=0GOTO 314
312 BOX X,-7,6,13,1;Y=-3;IF JY(P)=-1Y=-12
313 GOSUB 1005
314 P=P+1;IF P=3P=1
320 IF Z>28GOTO 366
330 GOSUB 2015;IF JX(P)=0IF JY(P)=0GOTO 310
340 X= @(P)+Db11bJX(P);Y= @(P+2)+Db9bJY(P)
350 IF PX(X,Y)=0GOTO 330
352 IF Y<31IF Y>-44GOTO 355
354 GOTO 330
356 IF ABS(X)>65GOTO 900
360 BOX @(P),@(P+2),6,5,1;@(P)=X;@(P+2)=Y;GOSUB 1000
362 X=-5;IF P=2X=4
364 IF PX(X+@(P),@(P+2))=0GOTO 370
366 P=P+1;IF P=3P=1
368 GOTO 190
370 NT=1;X= @(P);Y= @(P+2);FOR A=1TO 3;BOX X,Y,6,5,1;GOSUB 1000;NEXT A;NT=0
372 @(P+4)= @(P+4)+1
380 GOTO 190
900 IF ABS(X)>75GOTO 330
910 IF Y>-13IF Y<0GOTO 930
920 GOTO 330
930 @(P+4)= @(P+4)+5
935 BOX @(P),@(P+2),6,6,1
938 GOSUB 1000
940 NT=15;MU=49;MU=51;MU=53;MU=56;MU=48;MU=53;MU=56;MU=48;MU=48;MU=48;NT=0;GOTO 16
1000 NT=5
1005 BOX X,Y,4,3,2;BOX X,Y-1,2,1,1;IF P=1BOX X+2,Y+2,2,2,2;BOX X-3,Y+1,1,1,2
1010 IF P=2BOX X-2,Y+2,2,2,2;BOX X+2,Y+1,1,1,2

```

from Vol 4, page 87.

Bob Hensel  
8428 Ingleside Ave., South  
Cottage Grove, MN 55016

```

1020 MU=67;NT=0;RETURN
2000 BOX X-5,Y+1,1,8,2;BOX X-1,Y-3,6,1,2;BOX X-1,Y+4,6,1,2;RETURN
2010 BOX X+4,Y+1,1,8,2;BOX X+1,Y-3,6,1,2;BOX X+1,Y+4,6,1,2;RETURN
2015 Z=Z+1;A=Zc2;IF RM=0RETURN
2018 BOX @(P),@(P+2),6,5,1
2020 T=T-1;CX=-5;CY=36;PRINT #1,Tc60,":",#1,RMc10,#1,RM
2022 Z=Z+1;CX=-5;CY=37;PRINT #2,@(5);CX=38;PRINT #2,@(6),
2030 IF T=0GOTO 4000
2040 X=@(P);Y=@(P+2);GOSUB 1005;RETURN
4000 BOX 0,-3,62,26,2;CX=-25;CY=0;PRINT "GAME OVER
4010 IF JY(1)=1GOTO 15
4020 IF JY(1)=-1GOTO 1
4030 GOTO 4010
>

```

POLO is a two-player game. The computer rolls the dice and indicates the player who is up by blinking his horse. The player can move his horse the number of squares determined by the roll of the dice - and the direction by his joystick. Landing in the goal is 5 points. The goalie can move up/down via joystick. If a player lands in one of his 'Lucky Horseshoe', he gets a point and another turn. And there is a 15 second timer.

## 1 .BRICK 'N THE WALL

## 2 .MIKE PEACE

from Vol 4, page 77

```

10 T=0;Z=0;BC=-41;FC=8
20 BOX 0,0,160,88,1
30 NT=20;S=0;G(9)=-1;MU=49;BC=BC+24;MU=51;MU=53;BOX 0,-5,110,72,2;MU=62
40 FOR B=0TO 27STEP 9;FOR A=-50TO 50STEP 10;BOX A,B,9,5,(B#18);NEXT A;NEXT B
50 GOSUB 190;FOR A=0TO 200;NEXT A;IF Z>4GOTO 170
60 A=90;X=0;Y=0;B=RND(5)-3;C=-3;GOSUB 210
70 FOR G=1TO 2;BOX A,-35,11,3,3;A=KN(1)c3+KN(1)c16;BOX A,-35,11,3,3
80 BOX X,Y,1,1,3;X=X+B;Y=Y+C;BOX X,Y,1,1,3
90 B=B+(B=0)
100 IF Y>27C=-C;MU=70;B=B+RND(3)-2
110 IF Y<-20IF PX(X,Y+C)=X-A
120 IF PX(X,Y+C)BOX(X+85)c10b10-80,Y+C+Cc5b5,10,5,(Y>-15)b2;C=-C;MU=95;IF Y>-15
GOSUB 180;IF S=33GOTO 30
130 IF PX(X+B,Y)B=-B;MU=58
150 IF Y<-37FOR H=90TO 70STEP -1;MU=H;NEXT H;Z=Z+1;GOSUB 210;GOTO 50
160 G=1;NEXT G
170 CY=-10;CX=-15;PRINT " GAME";CX=-15;PRINT " OVER";A=KP;RUN
180 S=S+1;T=T+(Y+B)c5b2
190 CY=40;CX=-60
200 NT=0;PRINT "<SCORE> ",#0,T,"<BALLS> ",5-Z;NT=2;RETURN
210 BOX X,Y,1,1,3;BOX A,-35,11,3,3;RETURN
>

```

April 20, 1984

```

1 .
2 .
3 .REBOUND
5 CLEAR :&(9)=60;BC=121;FC=127;NT=4
8 CX=-30;CY=12;PRINT "LET'S PLAY";CX=-49;CY=-6;PRINT " * R E B O U N D * ";FOR
Z=0TO 1600:NEXT Z
10 H=0;S=0;G=20;E=75;F=35;M=1000;R=100;N=10;GOTO 180
20 L=(K#2)B127;&(2)=L;&(3)=L;L=116+(K#2);BC=L;&(0)=L;&(1)=L;FC=0;X=5;Y=5
30 CLEAR ;&(9)=212;FOR D=25TO -25STEP -N;FOR C=-65TO 65STEP N
35 BOX C,D,3,1;BOX C,D,5,1,1;BOX C,D,1,5,1;NEXT C;NEXT D
40 NT=S;A=RND (3)B5-N;B=RND (3)B5-N;IF A=0IF B=0GOTO 40
50 CY=F;CX=-F;PRINT "/\GET READY\^/";FOR Z=0TO 800:NEXT Z;BOX 0,F,160,B,2;IF
KGOSUB 250
60 BOX X,Y,5,5,1;FOR T=-84TO 30B;M;X=X+A;Y=Y+B;IF (ABS(X)=E)+(ABS(Y)=F)GOTO R
70 P=P+P*(X,Y+2);FOR Z=0TO W;IF X=I IF Y=JGOTO 280
80 IF P=84 S=S+Mb(K+1)+8400-Tc2b5;GOTO 140
90 NEXT Z;BOX X,Y,5,5,3;BOX X-A,Y-B,5,5,2;NEXT T;GOTO 130
100 BOX X,Y,5,5,3;BOX X-A,Y-B,5,5,3;IF ABS(X)=E A=-Xc15;B=JY(1)B5
110 IF ABS(Y)=F B=-Yc7;A=JX(1)B5;IF ABS(X)=EGOTO 300
120 MU=E;T=T-1;NEXT T
130 GOSUB 600;S=S+PbR-(84-ABS(T))c2b5
135 CX=-S1;CY=F;PRINT "TOO BAD.. DUMMY !!";FOR Z=0TO 2000:NEXT Z;CLEAR ;GOTO 18
0
140 CLEAR :&(9)=50;BC=200;FC=7;CY=8;NT=3;PRINT "#15,(K+1)B;M;CX=-F;PRINT "++ BONU
S! ++
150 IF K<3CX=-F;PRINT "SCORE: ",#6,S
160 &(21)=15;FOR Z=1TO G;FOR Q=15TO G;&(19)=Q;NEXT Q;NEXT Z;&(21)=0;&(19)=0;IF
(K+1)=3GOSUB 500
170 IF K<2K=K+1;P=1;CLEAR ;GOTO G
180 CLEAR ;&(9)=50;BC=8;FC=7;NT=0;PRINT " YOUR SCORE HIGH SCORE
190 PRINT " -----
200 IF S>H H=S
210 PRINT #B,S,#14,H;CY=0;PRINT "BALL SPEED-a
220 CX=-F;CY=-39;PRINT "R E B O U N D";CY=0
230 BOX 0,-39,90,9,3;W=(28)c50;CX=0;PRINT #2,W,;IF TR(1)CLEAR ;K=0;S=0;P=1;I=1
;J=1;GOTO G
240 GOTO 230
250 I=RND (13)B;N-E;J=RND (6)B;N-F;IF (I=5)+(J=5)GOTO 250
260 IF (I=J)+(I+J=10)GOTO 250
265 IF K#2BOX I,J,3,1,2;BOX I,J,1,3,2
270 FOR U=1TO 16;BOX I,J,5,5,3;MU=R;NEXT U;RETURN
280 IF P#84GOTO 130
290 S=S+Mb(K+1)+8400-Tc5b5;GOTO 140
300 CY=F;NT=0;&(9)=-1;BC=33;FC=7;PRINT " BALL IS STUCK IN CORNER
320 GOSUB 600;CX=-32;CY=-F;PRINT "YOU TURKEY !!";FOR Z=0TO 2000:NEXT Z;GOTO 180
500 CLEAR :&(9)=45;BC=200;FC=7;&(0)=89;&(1)=89;&(2)=FC;&(3)=FC
510 FOR X=60TO -64STEP -1;&(9)=X;NEXT X;BC=9;FOR X=-64TO -45STEP 1;&(9)=X;NEXT
X
515 CX=-F;CY=20;PRINT "YOU DID IT !!
520 PRINT ;PRINT " YOU'RE THE GREATEST";PRINT ;CX=-F;PRINT "AMERICAN HERO";F
OR Z=0TO 3500:NEXT Z;GOTO 180
600 &(22)=111;FOR Z=30TO 150;&(17)=Z;&(18)=Z+13;NEXT Z;&(22)=0;&(17)=0;&(18)=0;
RETURN

```

ORIGINALLY APPEARED IN Vol 3, page 124 and was the prize winner that month. There was a little space available, and some additions were made. Use the joystick to control the angle of rebound as the ball reaches the wall.

April 20, 1984



Vol 6, No 6

```

10 BC=15:PRINT "    MATH TEACHER
20 PRINT "-----
30 C=0
40 PRINT "ENTER 1 FOR ADDITION "
50 PRINT "    2 FOR SUBTRACTION "
60 PRINT "    3 FOR MULTIPLICATION
70 PRINT "    4 FOR DIVISION
80 INPUT B
90 PRINT "DIFFICULTY LEVEL
100 PRINT "ENTER 1 FOR EASY
110 PRINT "    2 FOR MEDIUM
120 PRINT "    3 FOR DIFFICULT
130 PRINT "    4 FOR VERY DIFFICULT
140 INPUT X
150 PRINT "HOW MANY QUESTIONS ?"
160 INPUT A
170 IF B=1GOTO 300
180 IF B=2GOTO 500
190 IF B=3GOTO 700
200 IF B=4GOTO 900
300 FOR N=1TO A
310 N=(N+1)-1
320 PRINT "QUESTION *",N
330 IF X=1;E=RND (5);F=RND (5)
340 IF X=2;E=RND (50);F=RND (50)
350 IF X=3;E=RND (500);F=RND (500)
360 IF X=4;E=RND (5000);F=RND (5000)
370 PRINT E;PRINT "+";PRINT F;PRINT "=";INPUT G
380 IF G=(E+F);PRINT "ABSOLUTELY CORRECT";C=(C+1)
390 IF G*(E+F);PRINT "NOPE THAT'S NOT CORRECT,    THE ANSWER IS",(E+F)
400 NEXT N
410 GOTO 1000
500 FOR N=1TO A
510 N=(N+1)-1
520 PRINT "QUESTION *",N
530 IF X=1;K=RND (5);F=RND (5);E=(K+F)
540 IF X=2;K=RND (50);F=RND (50);E=(K+F)
550 IF X=3;K=RND (500);F=RND (500);E=(K+F)
560 IF X=4;K=RND (5000);F=RND (5000);E=(K+F)
570 PRINT E;PRINT "-";PRINT F;PRINT "=";INPUT G
580 IF G=(E-F);PRINT "ABSOLUTELY CORRECT";C=(C+1)
590 IF G*(E-F);PRINT "NOPE THAT'S NOT CORRECT,    THE ANSWER IS",(E-F)
600 NEXT N
610 GOTO 1000
700 FOR N=1TO A
710 N=(N+1)-1
720 PRINT "QUESTION *",N
730 IF X=1;E=RND (5);F=RND (5)
740 IF X=2;E=RND (50);F=RND (50)
750 IF X=3;E=RND (100);F=RND (50)
760 IF X=4;E=RND (150);F=RND (75)
770 PRINT E;PRINT "b";PRINT F;PRINT "=";INPUT G
780 IF G=(E*F);PRINT "ABSOLUTELY CORRECT";C=(C+1)
790 IF G*(E*F);PRINT "NOPE THAT'S NOT CORRECT,    THE ANSWER IS",(E*F)
800 NEXT N
810 GOTO 1000
900 FOR N=1TO A
910 N=(N+1)-1

```

M. Ahmed  
219 McCroneys St.  
Oakville, ON, L6H 1H8  
Canada

In laying out this page, I noticed a couple of items that beginning programmers might want to experiment with. The program as written is quite self-explanatory and easy to follow. The suggestions I am including would "tighten up" the listing (that is, save memory space), but at the expense of some clarity. The idea is to use a SUBROUTINE whenever there is duplication of material. You will see the words "ABSOLUTELY CORRECT" a number of times. The program could be rewritten

1100 PRINT "ABSOLUTELY CORRECT"; RETURN and change line 380 to read  
380 IF G=(E+F);GOSUB 1100; C=(C+1) and lines 580, 780, and 975 would be similarly changed.

Some kind of thing for line 380, etc.

Also note that (E+F) is used a number of times. One could state early-on that S=(E+F) and then use S. And so forth.

## ROUND ROBIN UTILITY

LOWERCASE WORDS ARE 1-BYTE KEYPAD WORDS, UND  
ERSCORES ARE SPACES.

```

1 ,ROUND_ROBIN_UTILITY
2 ,BY_JOHN_HAMMOND
3 ,SEPTEMBER_1983
10 clear ;NT=0;CY=20;print "__ROUND_ROBIN_UT
ILITY
20 CY=5;print "__NUMBER_OF_TEAMS-";;input
""
30 if (T<3)+(T>999)print "___3 to 999_TEAMS"
;Y=5;gosub 950;goto 20
40 print "___STARTING_ROUND-";;input ""W
50 Z=T+2;U=RM;Z=T+U
60 if (W<1)+(W>Z-1)print "___1_TO",#4,Z-1,"
_ONLY";Y=-10;gosub 950;CY=-3;goto 40
70 K=3+W-1;L=Z+2+1;S=2-L;P=1;B=(W-1)+2;if RM
_L=L+S+B;S=1-S;goto 90
80 L=L+B;if L>Z-1 L=L-Z+1
90 CX=-23;print "for TEAM-";print "'0' -
for ALL TEAMS)
100 CX=37;CY=-11;input ""E
110 if (E<0)+(E>T)print "___0_TO",#4,T,"_O
NLY-----";Y=-17;gosub 950;CY=-11;goto 90
120 for R=W_to Z-1;J=K;K=K+1;M=-2;if E_goto
500
130 for N=1_to Z-1;J=J-1;if J=0_J=Z-1
140 I=J;if N=L_I=Z
150 if I<N+1_next N;goto 190
160 if I=ZxU_next N;goto 190
170 if M=30_gosub 300;if P_goto 220
180 M=M+2;*(M)=N;*(M+1)=I;next N
190 if U_ if M=30_gosub 300;if P_goto 220
200 if U_M=M+2;*(M)=0;*(M+1)=L
210 gosub 300
220 L=L+S;S=1-S;if L=Z_L=1
230 next R;gosub 450;run
300 if P_P=0;goto 330
310 gosub 450;if (A=99)+(A=104)run
320 if (A=98)+(A=107)if (*(0)>2)+*(0)=0;if
E=0_P=1;goto 410
330 clear ;print "__ROUND_ROBIN-";;#2,T,"_T
EAMS
340 print "_____ROUND",#4,R;CY=20;X=-70
350 for Q=0_to M_step 2
360 CX=X;X=-56-X;if *(Q)_print #3,*(Q),"_VS"
;goto 380
370 print " _BYE_-";
380 B=2;if *(Q+1)>9_B=3;if *(Q+1)>99_B=4
390 print #B,*(Q+1);if X<_0_print
400 next Q
410 M=-2;return
450 CX=0;CY=-39;print "ψ";A=KP;clear ;return

```

This program generates the opponent pairings in a round robin competition for three to 999 teams. The program begins with a set-up menu:

1. Enter the number of teams (3-999)
2. Enter the starting round to be displayed (Enter 1 when all rounds are required.)
3. Enter the team numbers to be displayed (Enter 0 when all teams are required.)

A maximum of 16 opponent pairings will be displayed on one screen. When more pairings are required for a round or when the display for a round is complete the program computes the next screen's information; and when ready, a down arrow is displayed. Enter LIST or 'divide' sign to end the display and RETURN to set up menu. Enter NEXT or 'multiply' to bypass the remainder of the round presently being displayed. Press any other key to display the next screen. When a round is complete, the program returns to the setup menu.

```

500 M=0;if E=L_goto 540
510 if E=Z_I=L_goto 530
520 I=J-E;if I<1_I=Z-1+I
530 *(0)=E;*(1)=I;goto 210
540 if U_*(0)=0;*(1)=E;goto 210
550 *(0)=E;*(1)=Z;goto 210
950 for B=1_to 999;next B;box 0,Y,160,22,2;
return

```

John Hammond  
1510 Troika Ct  
Mississauga, L5J 4C4  
Canada

April 20, 1984

## ARCADIAN

Vol. 6, No. 6.

## ATLANTIS

LOWERCASE WORDS ARE 1-BYTE KEYPAD WORDS, UNID-  
ERSCORES ARE SPACES.

```

1 CY=30;BC=0;FC=7;F=0;P=0;R=0;K=0;NT=0;pr
nt "____BY_FREB.RODNEY_Y1984";if JY(1)goto 10
2 gosub 90;G=0;CX=48;input "TURNS_(1-99)_"
;
3 gosub 90;CX=-44;input "SPEED_(1-2)_" ;S=0
26;H;M;S;B=3;S=54;I;F (S(1))+S(2)goto 3
4 gosub 90;CX=-44;input "WIND_(Y-1)_" ;W
10 gosub 90;U=S+41;H=U+3;gosub 70;gosub 50;
gosub 940
20 gosub 50;F=F+1;if F>Tgoto 2000
26 for A=-80to 66step H;CY=30;CX=A
30 NT=0;print "___";if TR(2)if N_U=R;gosub 2
00;NT=0;if R>V_A=66
35 V=next A;gosub 50
43 for A=70to -80step -H;CY=30;CX=A;print "<
_" ;if TR(1)if N_U=K;gosub 300;N=0;if K>V_A=-
80
45 V=next A;goto 20
50 N=1;box 0,28,160,14,2;for L=1to 300;next
L;return
60 clear ;P=1;gosub 100;run
70 BC=190;FC=0;return
75 NM=2;for L=250to 0step -5;NV=L;next L;V=I
return
80 if W=16=rnd (0)+H
85 return
90 box 0,0,160,44,2;CY=0;return
100 for C=-5to 6step 2;D=rnd (2);E=rnd (6)+2
110 box C,-30,B,E,3;next C;box 0,-33,14,6,1;
box 0,-33,4,2,3;box 0,-35,80,1,1;if F=0;retur
n
130 line -80,-36,0;line 79,-36,1;NT=0
132 Y=-36;for L=1to 4;Y=Y-2;X=79;line X,Y,0
134 I=rnd (4)+1;X=X-I;J=rnd (2);line X,Y,J;i
f X>-80goto 134
138 next L
140 print "____*A_T_L_A_N_T_I_S_*";box 0,35
,120,1,1;return
200 Z=1;X=A+10;gosub 80;NT=1;for Y=29to -36s
tep -U;F=X+(JX(2)*6)+G
240 box X,Y,1,2,3;box X,Y,1,2,3;MU=31;MU=59;
MU=31;NM=2;NV=35
245 if Y<-32;F Zgosub 250
248 next Y;V=NT=0;Z=1;return
250 for L=-2to 1;if X=L;gosub 800
255 next L;Z=0;return
270 box -1,-25,20,22,3;box -1,-25,20,22,3;bo
x 0,-21,26,22,2;BC=0;FC=190;box 0,31,120,8,2
275 BC=98;FC=0;NT=6;for L=1to 6;MU=90;MU=65;
next L;gosub 70;goto 940
300 Z=1;X=0;gosub 80;NT=1;for Y=-30to 35step
U;F=X+(JX(1)*5)+G
340 box X,Y,1,2,3;box X,Y,1,2,3;MU=87;MU=59;
MU=87;NM=2;NV=35;if Y>28;F Zgoto 360
350 next Y;NT=0;return

```

```

360 for L=-3to 1;if X=A;Lgoto 900
365 next L;Z=0;NT=0;return

```

```

800 NT=0;CY=-30;CX=-5;print "x*x";box 0,31,1
20,8,2;line 0,-30,0;line -5,-20,1;line 0,-18
,0;line 0,-30,1
840 line 5,-20,1;NT=3;for Q=90to 190step 10;
MU=0;next Q;F
850 NT=0;Z=2;CY=-30;CX=-5;print "****";BC=0;F
C=190;R=R+1;gosub 70;gosub 75;gosub 270;goto
100
900 NT=0;CY=30;CX=A;print "*";BC=0;FC=190;go
sub 70;Z=2;gosub 75;box A,31,20,8,2;K=K+1
910 NT=5;for Q=190to 10step -10;FC=7;BC=0;FC
=0;MU=0;next Q;NT=0;gosub 70
940 NT=0;CY=0;print $5,K,18,R;for Q=1to 500
;next Q;goto 90
2000 CY=0;print $5,K,"____GAME_OVER____",1,
R,"_"
2002 NM=2;for L=20to 146step 6;if TR(1)run
2006 NV=L;next L;BC=rnd (255);for L=290to 40
step -1;if TR(1)run
2009 NV=L+2;next L;FC=rnd (255);box 0,0,70,1
2,3;goto 2002
5000 gosub 90;CX=-21;print "STAND_BY";print

```

## ATLANTIS

AFTER YOU'VE TYPED PROGRAM, INITIATE  
WATER DRAWING ROUTINE BY ENTERING GOTO 60  
COMMAND. WHEN PROMPT 'TURNS\*' APPEARS, PRESS  
HALT. SET UP YOUR TAPE RECORDER TYPE GOTO  
5000. START TAPE AND PRESS GO. LOAD THE GAME  
WITH THE USUAL :INPUT:RUN

PLAYER 1 DEFENDS ATLANTIS, LAUNCHES THE  
MISSILES (TRIGGER) AND GUIDES THEM (JOYSTICK  
SCORE IS ON THE RIGHT # OF BOMBERS HIT).

PLAYER 2 ATTACKS ATLANTIS, RELEASES  
BOMBS (TRIGGER) AND GUIDES THEM (JOYSTICK).  
SCORE IS ON THE RIGHT (# OF CITIES HIT).  
SPECIAL REPLAY FEATURES!!! FOR A NEW GAME  
(A CHANGE IN NUMBER OF TURNS, SPEED OR WIND)  
SQUEEZE TR(1) WHEN GAME OVER APPEARS. FOR  
ANOTHER GAME (SAME NUMBER OF TURNS, SPEED &  
WIND) PUSH AND HOLD JOYSTICK 1 FORWARD THEN  
SQUEEZE TRIGGER 1. NOTE! PLAYER 2 GOES FIRST

Fred Rodney  
1190 Albany Ave  
Brooklyn, NY 11203

# ARCADIAN

SHOOT THE DUCK

April 20, 1984

Vol.6.No6

LOWERCASE WORDS ARE 1-BYTE KEYPAD WORDS. UND  
ERSCORES ARE SPACES.

```

1 .11_11_1023_33_3300_5_5_650
2 .31023_32_2100000_
3 clear ;SM=1;P=20200;CALLP74;NT=1;goto 31
4 CY=39;print "HUNTER: ",#0,M,"SHOTS"
5 ;return
6 if *(0)<0;f N>1600=45
7 if *(0)<0;f N<100=45;return
8 return
9 NM=-1;NV=-1;VC=-1
10 for U=1to 20;next U;return
11 if M=1B=B+K;D=D+W
12 if M=2E=E+K;F=F+W
13 if M=3G=G+K;H=H+W
14 if M=4I=I+K;J=J+W
15 return
16 if TR(M);gosub 9;NT=0;K=K+1;gosub 4;gosub
17 18
18 return
19 for Q=-34to 50step 4;gosub 500;if Q>45ret
20 urn
21 N=N+*(0);gosub 301;if *(0)>0Z=Z+1;if Z>12
22 9Z=128
23 if *(0)<0;Z=Z+1;if Z>131Z=130
24 gosub 23;gosub 6;next Q;return
25 if PX(0,0)=0;gosub 700;return
26 if PX(0,0-1)=0;gosub 700
27 return
28 NT=S;for U=1to 3;MU=112;BC=U*20;next U;BC
29 =7;return
30 CY=15;for U=1to 52step 2;TV=47;TV=92
31 if U>24CY=-13
32 next U;return
33 clear ;gosub 28;CY=0;input "___NUMBER_OF_
34 HUNTERS?";L
35 if L>4L=4
40 clear ;gosub 28;CY=0;input "___NUMBER_OF_
41 DUCKS?";T
42 clear ;if T>99T=99
60 NT=0;M=1;R=0;V=0;W=0;B=0
61 count ;for U=2000to U+14step 2;X(U)=0;fne
62 xt U
63 Z(P+26)=P+50
64 Z(P+24)=2562;Z=128;Z(P+17)=Z;Z(P+10)=Z
65 Z(P+8)=26684;Z(P+15)=10307;BC=7;FC=160
66 Z(P+6)=517;Z(P+13)=7731;CALLP
67 Z(P+6)=12083;Z(P+13)=20787;CALLP
68 Z(P+6)=27443;Z(P+13)=29645;CALLP
69 Z(P+8)=10289;Z(P+24)=1281
70 Z(P+26)=P+28
71 gosub 4
95 if R=1;goto 200
100 A=0;box 0,-40,3,8,1;CY=-40;CX=13;gosub 6
101;print "PULL
110 if JY(M)box 18,-39,30,11,2;R=R+1;goto 14
110
130 goto 110
140 S=rnd (4)+1;Y=rnd (2)+S*10
141 gosub 300;C=rnd (2);if C=2goto 161
151 for N=0to 150step S;Z=Z+1;if Z=130Z=128;
161 *(0)=S
152 goto 162
161 for N=150to 4step -S;Z=Z+1;if Z=132Z=130
162 *(0)=S
162 gosub 301;NT=5
176 gosub 16
178 next N;box 0,10,160,52,2;NT=1;*(10)=176
179 gosub 11
180 M=M+1;V=0;K=0;W=0;if M<L_M=1

```

```

190 goto 90
200 clear ;FC=200;CY=20;print "HUNTER: ",#1,
21 _#2_#3_#4
210 print ;print "HITS:",#6,D,#4,F,#4,H,#4,
22 J
220 print ;print "SHOTS:",#5,B,#4,E,#4,G,#4
23 ,I
230 print ;print "___USE_TR(1)to run
240 if TR(1)goto 60
250 goto 240
300 Z(P+7)=-9999;Z=128;Z(P+10)=Z;Z(P+17)=Z;f
31 return
301 Z(P+17)=Z
302 Z(P+14)=Y*256+N;CALLP
303 Z(P+7)=Z(P+14);Z(P+10)=Z(P+17)
304 NT=5;if V>60;Y=Y+6;if Y>81Y=81
305 if Y>80Z(P+7)=-9999;NT=0;*(10)=160;CALLP
306 MU=112;return
500 box 0,0,1,2,3;box 0,0-4,1,2,3;return
600 NT=S;for O=-24573to -24513step 1;MU=45;H
61 U=Z(0)
601 if O=-245410=-24538
602 next O;NT=1;return
700 box 0,0,1,2,3;V=N;W=4;I=0=45;gosub 26;re
71 turn

```

James Wilchen  
18321 Moonflower Ct  
Cincinnati, OH 45239

## SHOOT THE DUCK

YOU TRY TO SHOOT THE DUCK WITH LESS SHOTS. YOU HAVE TO SHOOT BEFORE HE IS LINED UP WITH THE GUN IN HOPES HE WILL FLY INTO YOUR BULLET. PLAYS 1 TO 4 PLAYERS AND 1 TO 99 DUCKS.

FIRST YOU MUST LOAD THE "SHOOT THE DUCK DATA" ON THE DATA LIST WITH THIS ROUTINE: FOR A=20200 TO 20312 STEP 2;INPUT X(A); NEXT A

INPUT THE DATA FROM THE KEYPAD, THEN SAVE IT ON TAPE WITH :PRINT X(20200),57 DO NOT REWIND TAPE!!! TYPE IN PROGRAM AND SAVE IT ON THE TAPE JUST BEYOND THE DATA YOU SAVED BEFORE. IMPORTANT! SAVE THE MAIN PART OF THE PROGRAM LIKE THIS

```
:PRINT X(-24576),900
:PRINT X(20000),46
```

NOW THAT YOU HAVE ALL THIS STUFF ON TAPE YOU CAN LOAD IT ALL INTO MEMORY LIKE THIS:

```
:INPUT X(20200);:INPUT X(-24576);
:INPUT X(20000);SM=2
```

WHEN IT ALL GETS LOADED, FIND A BLANK SPOT ON YOUR TAPE AND SAVE IT ALL IN ONE BLOCK LIKE THIS:

```
PRINT "RUN";:PRINT X(16384),2010
```

NOT ONLY WILL THIS TIE IT ALL TOGETHER IN ONE PIECE, IT WILL ALSO MAKE YOU PROGRAM RUN AUTOMATICALLY WHEN YOU LOAD IT WITH :INPUT

## SHOOT THE DUCK DATA

USING THE FOR-NEXT ROUTINE ABOVE, INPUT THIS DATA, GO DOWN EACH COLUMN.

|        |       |        |        |       |
|--------|-------|--------|--------|-------|
| 8669   | 1281  | 0      | 0      | 18433 |
| 20221  | 20228 | -8161  | -8960  | 20053 |
| -43    | 5942  | -897   | -43    | 1876  |
| -3789  | 15612 | -257   | 53     | 22850 |
| 10456  | 1560  | -257   | 10280  | 302   |
| 130    | -1017 | -385   | 20287  | 18762 |
| 13311  | 6204  | -1985  | 20991  | 333   |
| 20741  | -6036 | -8165  | -11832 | 18775 |
| -32216 | 15423 | -32767 | 1737   | 17228 |
| -12032 | 24600 | -32765 | 21828  | 17736 |
| -32567 | 16352 | -16377 | 19267  | 82    |
| 0      | 6204  |        |        |       |



April 20, 1984  
Vol 6, No 6

1 .COLOR CHART

2 .

3 .BY JIM WINN

4 .

5 E=480;F=1250

10 CLEAR ;BC=0;FC=7;C=0;NT=0

20 PRINT " 0=BLACK 7=WHITE 90=RED 205=CYAN 172=GREEN 4

3=MAGENTA

30 PRINT " 249=BLUE 126=YELLOW

70 NT=3;CX=-60;CY=-20;PRINT "SELECT YOUR COLOR ?";NT=0

80 K=KN(1)C30

85 CX=-42;CY=-30

90 IF K=-460SUB 400

100 IF K=-360SUB 410

110 IF K=-260SUB 420

120 IF K=-160SUB 430

130 IF K=160SUB 440

140 IF K=260SUB 450

150 IF K=360SUB 460

160 IF K=460SUB 470

170 IF TR(1)GOTO 190

180 GOTO 80

190 CLEAR ; IF (A=0)+(A=7)+(A=43)+(A=90)+(A=126)+(A=172)+(A=205)+(A=249)C=C+A

200 C=C+JY(1)

210 IF JY(1)CLEAR

220 IF C>255 C=255

230 IF C<0 C=0

240 BC=C;FC=BC+12

245 IF JY(1)=0CX=-35;CY=0;PRINT C

250 IF JX(1)=1GOTO 10

255 IF JX(1)=-1 GOTO 800

280 GOTO 200

400 A=0;PRINT A;GOTO E

410 A=90;PRINT A;GOTO E

420 A=172;PRINT A;GOTO E

430 A=249;PRINT A;GOTO E

440 A=7;PRINT A;GOTO E

450 A=205;PRINT A;GOTO E

460 A=43;PRINT A;GOTO E

470 A=126;PRINT A;GOTO E

480 RETURN

800 CLEAR ;&(9)=84

810 &(0)=C;&(1)=C;B=C

820 C=0;BC=0;FC=7;NT=0

830 PRINT " 0=BLACK

840 PRINT " 7=WHITE

850 PRINT " 90=RED

860 PRINT " 172=GREEN

870 PRINT " 249=BLUE";NT=3

880 CY=-20;PRINT "SELECT COLOR";NT=0

890 K=KN(1)C50+2

895 CY=-30

900 IF K=060SUB 1200

910 IF K=160SUB 1210

920 IF K=260SUB 1220

930 IF K=360SUB 1230

940 IF K=460SUB 1240

950 IF TR(1)GOTO 970

960 GOTO 890

970 CLEAR ; IF (A=0)+(A=7)+(A=90)+(A=172)+(A=249)C=C+A

980 C=C+JY(1)

985 IF JY(1)CLEAR

990 IF C>255 C=255

1000 IF C<0 C=0

1010 NT=0;BC=C;FC=B

1015 IF JY(1)=0CY=0;PRINT C;CX=3;CY=0;PRINT B

1020 IF JX(1)=1&(9)=50;GOTO 10

1025 IF JX(1)=-1CLEAR;GOTO 820

1030 IF TR(1)=0GOTO 980

1070 GOTO 980

1200 A=0;PRINT A;GOTO F

1210 A=7;PRINT A;GOTO F

1220 A=90;PRINT A;GOTO F

1230 A=172;PRINT A;GOTO F

1240 A=249;PRINT A;GOTO F

1250 RETURN

>

This program is a utility to help you select colors for a program. A menu first appears asking for a choice of 7 major colors. Once this has been picked, you can make a fine adjustment by the joystick, forward or back. Once you see one you like, move the joystick to the left, and you can make a selection for the second color. Pull the trigger to see how the colors interact. Start again by pushing the joystick right. Code numbers for each color also appear for future use.

from Vol 3, page 35.

Jim Winn  
Box 98  
Boiling Springs, NC 28017

ASTROCADE CARTRIDGES for sale at from \$5 to \$28 each. Send for list. John Capra, 232 Edgewood Ave., Thornwood, NY, 10594 914-769-6662

FOR SALE: BALLY ARCADE, 6 CONTROLLERS, A BASIC, B BASIC + CASS. INTER., 23 CARTS (INCL. TREASURE COVE AND MUNCHER), 24 GAME TAPES (50 PROGRAMS +), INCL. 10 WAVEMAKERS, 6 L & M, 3 ESOTERICA, AND THE "BEST OF ARCADIAN-1980". ALSO INCL. HACKERS GUIDE, SERVICE MANUAL, AND ALL ARCADIAN ISSUES. CALL WITH BEST OFFER! WILL CONSIDER SEPARATING-KEN BISHOP, 533 FOREST WAY, BOLINGBROOK, IL 60439 (312) 972-0266

Astrocade programs on tape (Astro-Basic: 2000 Baud):

1. Morse Code Trainer with Morse Code II: An easy way to learn the code. Letters, numbers, punctuation, and special messages. 54 codes in all. A learn and test mode. Programmable speeds... \$9.00
2. the original Astro-Analyst: Designed with the aid of a symbols expert. Not a random fortune telling program. Gives a unique "Personality Profile. Great party game..... \$9.00
3. Rhythm Box: For musicians and songwriters. For practicing lead guitar and for inspiration. All in 3-part harmony. Seven styles, three speeds remote control, and 4/4 & 3/4 formats..... \$8.00

All programs are supplied with complete documentation. Quality cassettes are used. Prices are LOW!

24 hour C.O.D. Hotline (USA only): (212) 629-2071

or send your check or money order today to:

\* Fred Rodeny \*

1190 Albany Avenue, Brooklyn, New York 11203.

C.O.D. orders add \$1.75. All post-paid 1st class.

THE PRICE OF THE ASTRO-ANALYST HAS BEEN RAISED FROM \$7 TO \$9. ORIGINALLY, THE TAPE WAS TO CONTAIN AN AUDIO DEMO OF THE UPCOMING "RHYTHM BOX" PROGRAM AT NO EXTRA CHARGE.

AFTER SOME CAREFUL CONSIDERATIONS IT WAS DETERMINED THAT A DEMO WOULD PROVE USELESS TO PURCHASERS AFTER ONE PLAY. THEREFORE, THE GAME "MEMOMAX" WILL BE INCLUDED, ON SIDE 2, OF THE ASTRO-ANALYST. THE EXTRA CHARGE REFLECTS THE ADDED TIME NEEDED TO PREPARE EACH TAPE AND FOR THE ASSOCIATED DOCUMENTATION.

60

ARCADIAN

Robert Fabris, zero-ing in  
3626 Morrie Drive  
San Jose, CA 95127

the SOURCE TCD 959

FIRST CLASS  
U. S. POSTAGE  
PAID  
Sunnyvale, CA  
Permit No. 931

THIN ISSUE because the economy is getting better. (?) Well, its this way. The people who were writing the most - both programs and tutorials, were out of work. So they had plenty of time to sit down and invent games, or write tutorials for the Newsletter. Now they are working, and time is at a premium to them. Maybe when school is out, the students amongst us can contribute some energies for us all.

CONSUMER ELECTRONIC SHOW is coming up in the first week of June, at Chicago. Rumor has it that Astrocade will have something to show, but at an off-site location. (Many companies hire a couple of hotel rooms for their displays - since transportation is free, delegates can easily 'make the rounds') What to show? Don't know, but again there is a rumor about new technology hand controllers, and a streamlined board (and box?) that can handle the European TV system (PAL) for overseas sales.

QUICKIE #1 Fred Rodney (ad p. 65) reports that his cassettes now come in the soft plastic boxes at no change in prices.

QUICKIE #2 Scores: Pirate's Chase 3,024,100 / after 2hr 10min by Michael Winiarczyk (age 12). I was to have included some scores from the vaults of Michael Prossise, but they have been misplaced. Hope to be back on the track in the next issue.

#### GAMES INCLUDED:

HANGMAN is a takeoff on the classic Hangman word spelling game. It has two novel features - letters being entered are hidden from view of the opposing player - and the penalty for losing is not a hanging...

BOTS II is a reworked game originally submitted by Ron McCoy. The 9x19 playing field is sprinkled with walls (I) and Bots(\*). Each time you pull the trigger, the Bots all move toward you. If they hit each other or a wall, they disappear.

BOTS II operates from Hand Control #1:

Knob controls the pointer as in the original version, for 8 possible directions of movement, or staying where you are if the pointer is not visible (far right or left turn of the knob. A sound was added for audible feedback when the pointer is moved.

Trigger fires the raygun if shots are left (shown at the bottom of the screen) and a BOT is within one square. Since it has a BOT sensor built in, it cannot be accidentally fired when they are out of range. The raygun sound effect is fun as the Bot vaporizes right before your eyes!

Joystick (forward or backward) moves you one square in the direction of the pointer, or ends your turn if you want to stay where you are.

As in the original version, after you move one square (or stay put), all Bots move one square toward you. If they hit a wall or another Bot, they are destroyed. If they reach you, you're dead! It still gets hairy once your raygun is out of power!

```

1 .BOTS II
2 R=15;B=3;GOTO 30
3 X=RND (20)b7-77;Y=RND (10)b8-40;O=X;P=Y
4 T=20b(Y+32)c8;S=(X+77)c7;C=S+T;RETURN
5 P=(200-C)c20+1;P=11-P;O=C-(20bP)+20;P=8bP-40;O=7b0-77;X=O;Y=P;RETURN
6 CY=-40;CX=-65;RETURN
7 GOSUB 5;IF O>J X=X-7
8 IF O<J X=X+7
9 IF P>K Y=Y-8
10 IF P<K Y=Y+8
11 G=X;H=Y;GOSUB 4;IF @(C)=43GOSUB 20;TV=79;GOTO 130
12 IF @(C)=N+1I=I-1
13 IF @(C)=73FOR Z=1TO 8;MU=80+Z;BOX 0,P,5,5,3;NEXT Z;@(A)=0;I=I-1;GOSUB 27;GO
SUB 22;RETURN
15 U=1;@(C)=N+1;GOSUB 20;TV=42;GOSUB 27;RETURN
17 GOSUB 3;IF @(C)#0GOTO 17
18 RETURN
20 CX=G;CY=H;RETURN
21 CX=O;CY=P;RETURN
22 IF W=1RETURN
23 NT=0;GOSUB 6;PRINT #1,"SHOTS:",B," BOTS:",;IF I<10PRINT " ",
24 PRINT #1,I,;NT=3;RETURN
26 M=M+C;C=M;RETURN
27 BOX 0,P,6,7,1;RETURN
30 C=0;U=1;N=0;I=R;W=0;CLEAR
40 FOR Y=-32TO 40STEP 8;FOR X=-70TO 63STEP 7;C=C+1;@(C)=0;BOX X,Y,6,7,1;NEXT X
;NEXT Y
50 FOR A=1TO ABS(R-4);GOSUB 17;GOSUB 21;TV=73;@(C)=73;NEXT A
60 FOR A=1TO R;GOSUB 17;GOSUB 21;TV=42;@(C)=1;NEXT A;GOSUB 23;GOSUB 17
72 FOR L=1TO 155;BOX 0,P,7,7,2;LINE 0,P,4;BOX 0,P,2,2,1;Z=Q;Q=(KN(1)+127)c28
77 IF Q=1LINE 0,P+3,1;M=20
78 IF Q=2LINE 0+3,P+3,1;M=21
79 IF Q=3LINE 0+3,P,1;M=1
80 IF Q=4LINE 0+3,P-3,1;M=-19
81 IF Q=5LINE 0,P-3,1;M=-20
82 IF Q=6LINE 0-3,P-3,1;M=-21
83 IF Q=7LINE 0-3,P,1;M=-1
84 IF Q=8LINE 0-3,P+3,1;M=19
85 IF (Q<1)+(Q>8)M=0
86 IF Z#Q MU=50
87 U=C+M;IF (U<1)+(U>200)GOTO 90
88 IF JY(1)IF @(U)<N+1)+(M=0)BOX 0,P,7,7,2;GOSUB 27;GOTO 95
89 IF TR(1)IF B#0IF M#0IF @(U)=N+1GOTO 200
90 NEXT L;M=0
95 @(C)=0;GOSUB 26;GOSUB 5;GOSUB 21;TV=43;@(M)=43
100 J=0;K=P;U=0;N=N+1;I=0;W=1;FOR A=1TO 200;IF @(A)=N C=A;I=I+1;GOSUB 7
102 NEXT A;W=0;GOSUB 22
110 IF U=1 C=M;GOSUB 5;GOTO 72
120 GOSUB 6;R=R+1;PRINT "YOU WIN!";GOTO 135
130 GOSUB 6;R=R-2;PRINT "GO BOTS!";
135 B=Rc2-4;IF B<2B=2
140 PRINT " TR TO GO",
160 IF TR(1)GOTO 30
162 GOTO 160
200 B=B-1;&(20)=169;NT=99;MU=60;NT=3
220 D=0;E=P;F=C;GOSUB 26;A=C;GOSUB 5;@(C)=73;GOSUB 13;O=D;P=E;C=F;&(20)=0;GOSUB
23;GOTO 90

```

- Steve Walters  
556 Langfield  
Northville, MI 48167  
(313) 349-1083

# astrocade/UNDERGROUND

I would like to thank all of the People who ordered from us in the Past month. However, we still have a large number of games which we would like to Pass on to you at a substantial savings.

To start things off, we are continuing our exclusive L&M Software Super Sale. This time around we are offering the following cassettes (AstroBASIC only).

|          |                                 |        |
|----------|---------------------------------|--------|
| TaPe #5  | Search & Destroy/Air Raid       | \$5.00 |
| TaPe #6  | Star Base 2000/Space Quest 2001 | \$5.00 |
| TaPe #17 | Nautilus                        | \$7.50 |

It now appears that the rebirth of Astrocade is just around the corner, so now is the time to stock up on the following fine software from Astrocade.

|                 |                   |                     |
|-----------------|-------------------|---------------------|
| # 2011          | Galactic Invasion | \$29.95 now \$1.95  |
| # 2012          | SPace Fortress    | \$29.95 now \$12.95 |
| # 6004          | AstroBASIC        | \$59.95 now 29.95   |
| # 4004          | Biorhythm         | \$29.95 now \$4.95  |
| # 2010          | DogPatch          | \$29.95 now \$4.95  |
| # 3002          | Football          | \$29.95 now \$12.95 |
| **Dealer Demo** |                   | \$29.95 now \$1.95  |

We also carry a complete line of accessories for the Astrocade including Hand Controllers, Blank TaPes, and a limited amount of Parts.

ABC also has all of the newest in Software for the Astrocade. Including such favorites as Sneaky Snake, Muncher, Ms.Candyman, Sea Devil, Solar Conqueror, and Cosmic Raiders. Just give us a call to get the latest information. Also request your copy of the free Astrocade newsletter. Anytime that you Place an order your name is Placed on our mailing list so you can continue receiving our newsletter.

We try to make it as easy as Possible to order from us. Just give us a call or drop us a line letting us know what you need. Please no collect calls and also no calls on Wednesday. However, we do have a 24-hour ordering line so you may call anytime after operating hours. Please add \$1.50 for shipping and handling on each order(\$2.50 to Canada). VISA and Master Card are accepted.

ABC Hobbycraft  
2155 East Morgan Ave.  
Evansville, IN 47711  
(812)477-9661

MAY 25, 1984

ARCADIAN

Vol. 6 No. 7

```

3 .
5 .BANGMAN
6 .E SAMS 3/3/79
10 CLEAR ;PRINT "ONE PERSON KEYS IN A WORD TO 10 LETTERS;ANOTHER TRIES TO GUES
5 IT WITH NO
20 PRINT "MORE THAN 9 WRONG GUESSES USING KN & TR(1)
30 PRINT ;PRINT "PRESS GO
50 I=K;IF I=13 CLEAR
100 E=0;Q=0
200 PRINT "ENTER WORD, THEN PRESS GO.
300 FOR A=0TO 9
310 CY=31
320 PRINT "LETTER *",*3,A+1
330 BOX -55,23,50,8,2
400 K=K+P
410 IF K=13 GOTO 790
420 IF K>90 PRINT "INVALID";GOTO 310
430 IF K<65 PRINT "INVALID";GOTO 310
500 *(S)=K;*(A+10)=K 9500 CX=-50;CY=16;PRINT "PRESS GO";GOTO 50
780 NEXT A 9500 BOX 60,27,10,14,1;BOX 58,28,2,1,2;BOX 62,28,2,1,2;BOX 60,24,6,1,2;RETURN
790 CLEAR
800 FOR B=0TO A-1
900 Y=-32;X=-80+(B*8)+3
1010 BOX X,Y,7,3,1;NEXT B
1100 CY=-24;CX=6;PRINT "USED LETTERS";CY=-32;CX=42;PRINT "BELOW:
1200 FOR M=0TO 25;*(M+20)=M+65;NEXT M
1300 FOR D=0TO 25
1400 CY=31;CX=-80
1410 PRINT "GUESS *",*3,D+1
1420 BOX -33,19,94,16,2
1430 G=(KN(1)+132)*10+65
1440 CY=23;CX=-74;TU=G
1450 IF TR(1)=0 GOTO 1430
1540 IF *(G-45)=-1 PRINT "HAS BEEN USED";GOTO 1400
1550 *(G-45)=-1;CY=-40;CX=-78+((G-65)*6);TU=G
1600 FOR C=0TO A-1
1700 CY=-25
1800 IF G=*(C) CX=-79+(C*8)+3;TU=G;Q=1;*(C)=-1
1900 NEXT C
2000 IF Q#1 GOSUB 9000+*(C*10);E=E+1;IF E=9 GOTO 9000
2050 Q=0
2100 FOR F=0TO A-1
2110 IF *(F)*=-1 GOTO 2200
2120 NEXT F
2130 CY=17;CX=-50
2140 PRINT "CONGRATULATIONS
2150 CY=0;CX=-80;PRINT "PRESS GO";GOTO 50
2200 NEXT D
9000 CX=-80;CY=-9
9010 PRINT "SORRY ABOUT THIS
9020 PRINT "THE WORD WAS
9030 FOR H=0TO A-1
9035 CX=-79+((H*8)+3)
9040 TU=*(H+10);NEXT H
9060 BOX -16,0,10,10,1;BOX -8,7,27,5,1;BOX -19,11,1,2,1;BOX 4,11,1,2,1;BOX -9,4,
1,4,1
9110 BOX -6,3,1,5,1;BOX -8,0,6,1,1;BOX -10,7,3,3,2;BOX -17,7,2,1,1;BOX -14,7,3,3
,2
9160 BOX -14,7,1,1,1;BOX -11,7,1,3,2;BOX -9,6,2,1,2;BOX -7,8,3,1,2;BOX -7,7,1,2,
2
9200 *(S)=222;*(0)=87;*(1)=87;*(2)=80;*(3)=80
9225 FOR U=0TO 5
9230 *(23)=255;*(21)=255
9240 *(23)=0;*(21)=31
9260 FOR V=0TO 20;*(19)=V;NEXT U
9270 *(21)=0;*(19)=0
9300 X=RND (10)+55
9310 Y=RND (12)
9320 BOX X,Y,1,1,2
9340 NEXT U
9345 FOR Z=0TO 5000;NEXT Z
9410 *(S)=50;FC=0

```

```

1 .
2 .
3 .
4 *** CIRCLE PLOTTER
5 CLEAR ;;RETURN ;NT=0
7 BC=0;FC=131
10 INPUT "Xa" A
11 INPUT "Y" B
12 INPUT "RAD?" R
13 U=1;O=1;P=1;Q=1
15 F=A-R
16 FOR X=FTO F+2bR
17 S=RbR-((X-A)b(X-A));T=Uc4; IF T>Rc8T=U-1
18 FOR U=TT0 500
19 IF (UbU)>SGOTO 21
20 NEXT U
21 U=U-1; IF (S-UbU)<((U+1)b(U+1))-SGOTO 23
22 U=U+1
23 Y=U+B
24 BOX X,Y,O,P,Q;BOX X,Y-(2bU),O,P,Q
25 BOX Y-B+A,X-A+B,O,P,Q
26 BOX Y-B-(2bU)+A,X-A+B,O,P,Q
27 NEXT X
28 CY=40;GOTO 10
110 GOTO 10

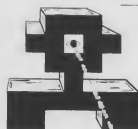
```

## BANGMAN DOCUMENTATION:

```

10 - 200 Initialize and instructions.
300 - 700 Ask for and accept up to ten valid letters.
600 Store the word in two locations:
    1. To keep track of the letters correctly guessed.
    2. To print the word if not guessed in nine tries.
800 - 1010 Set up blanks for the word.
1200 Store each letter of the alphabet for future use so the
    same letter is not used twice.
1300 Initiate guessing loop. Allows 26 guesses.
1430 - 1450 Allows one to guess a letter by turning knob #1.
1540 If storage position is set to -1 the letter has been used.
1550 Sets value of storage position to -1 and prints letter at
    the bottom of the screen.
1600 - 1900 Loop through the storage positions in 600 (1). If a match
1800 is found print the letter in the appropriate location(s)
    on the blanks established in 800-1010 and change the
    storage position value to -1. Set flag "Q" to 1.
2000 If the flag "Q" is not equal to 1 then the chosen letter
    did not match a letter in the word so go to subroutine
    9600 plus counter E times 10 and print that portion of the
    man. Increment the E counter. If there have been nine
    wrong guesses default to 9000 to "bang" part of bangman.
2050 Otherwise flag "Q" equals 0.
2100 - 2200 Loop through storage positions in 600 (1). If all positions
    are -1 then the word has been guessed. Print "congratulations"
    and press go to start a new game.
9000 - 9020 The word was not guessed within the nine wrong guesses
    allowed. The man was completely built, so -
9030 - 9040 Print out the word (from 600 (2)) on the blanks.
9060 - 9160 Draw a gun with the word COLT on it.
9200 Change the screen to a border format.
9225 - 9340 Put six random shots in the body of the man. Use sound
    effects. 9230-9240 is the shot. 9260 is the ricochet.
9350 Blank out screen
9360 - 9370 Blank out man
9400 Uncover screen from top to bottom with man gone.
9410 Restore screen to full screen format.
9500 Press go to start a new game.
SUBROUTINES
9600 Prints head, eyes, mouth.
9610 Prints neck.
9620 Prints body.
9630 Prints right arm.
9640 Prints left arm.
9650 Prints right leg.
9660 Prints left leg.
9670 Prints right foot.
9680 Prints left foot.

```

Project Cyclops  
Radar Blast

The cyclops is  
striking at your  
base. You man the  
radar, & steer the  
missile. Miss often  
and the cyclops  
will find you.

- charge,  
and fire at you!

only \$8.

## Additional Titles

Mosaic Code Frapper &  
Mosaic Code &  
Mosaic Code  
Mosaic Code  
Mosaic Code

\$9 and post

Address Analyst & Mosaic  
4 Super Mosaic  
4 Super Mosaic  
4 Super Mosaic  
4 Super Mosaic

\$9 and post

Raytheon Box in Box & M  
4 Super Mosaic  
4 Super Mosaic  
4 Super Mosaic  
4 Super Mosaic

\$8 and post

Fred Rodney  
1090 Albany Avenue  
Brooklyn, NY 11205

CU B 10 SA only Add \$115.  
(1212) 6-25 6071  
on line 2-4 hanging

1000 1000  
1000 1000  
1000 1000  
1000 1000

APPI (Mac Pro) -  
American Radar Display  
Simulation

```

3 CLEAR
5 FC=7;BC=163;&(9)=145;&(0)=106;&(1)=106
5 &(2)=0;&(3)=0
7 PRINT "C(CHECKERS JOHN COLLINS";GOTO 3000
8 R=U;0=-1;X=11;U=89;T=-1;V=8;A=12
9 NEXT 0:NEXT X
10 NEXT U:NEXT V;IF T<0GOTO 1200
20 GOSUB 2000;PRINT "KEY RUN ";STOP
50 CX=-71;FOR U=ATO 89;IF @(U)<4GOTO 55;A=U;U=89
55 NEXT U;FOR U=1TO 8;PRINT #1,U;FOR U=ATO 89;IF @(U)<4GOTO 10
60 FOR X=STO 11STEP 2;FOR Q=1TO -1STEP -2;IF @(U)=4Q=-1
70 B=QbX;S=U+B;IF @(S)=0GOTO 9
75 IF U>2IF @(S)*3GOTO 9
80 C=B+B;F=Qb20;Z=Ub100;GOTO Z
100 IF @(U+C)*3GOTO 9
200 IF @(S)>2GOTO 9
220 IF V=1 S=U+C;GOTO 8
230 S=U-B;IF @(S)*3GOTO 9
235 IF @(U-C+F)=2GOTO 260
240 IF @(U-F)>3 U=U-F;GOTO 8
250 IF @(U-C)>3 U=U-C;GOTO 8
260 S=U-B+F;IF @(S)=3GOTO 8
290 GOTO 9
300 IF @(S-F)*1GOTO 9
310 IF @(S)=3GOTO 8
320 S=S-2b(X-10);IF @(S)=3GOTO 8
330 GOTO 9
400 IF @(U+C)=0IF @(U)=4GOTO 8
410 GOTO 9
500 L=1
500 L=1;IF @(U+C)<3GOTO 9
510 IF @(U+F)<3IF @(U+C-F)=3GOTO 9
520 IF @(U+F)=3IF @(U+C-F)=1GOTO 9
525 IF V=5GOTO 700
530 L=L+1;D=0;(U+LbB);IF (D=0)+(D>3)GOTO 9
550 IF L*2IF D<3GOTO 8
560 GOTO 530
700 IF @(U)=5GOTO 9
800 GOTO 8
1000 CX=-71;CY=40;PRINT "FROM";GOSUB 1700;R=I;PRINT " TO";GOSUB 1700;S=I
1010 IF (0(R)>2)+(0(R)=0)+(0(S)*3)GOTO 1000
1040 IF 0(R)*1IF R>SGOTO 1000
1200 IF ((S-R)b(S-R))<122GOTO 1500
1210 IF T>0IF 0((S+R)c2)<4GOTO 1000
1220 J=T;0(S)=0(R);0((S+R)c2)=3;0(R)=3
1400 FOR X=STO 11STEP 2;G=S+JbX;IF (0(G)=3+T)+(0(G)=3+T+T)GOTO 1450
1430 GOTO 1500
1450 G=S+2bJbX;IF 0(G)*3GOTO 1500
1470 R=S;S=G;X=11;NEXT X;GOTO 1220
1500 NEXT X;IF (ABS(0(S)-3))=2IF J=T J=-T;GOTO 1400
1510 GOSUB 2000;GOTO 1510
1500 0(S)=0(R);0(R)=3;I=R;GOSUB 2020;I=S;GOSUB 2020
1510 IF T>0IF S>800(S)=1
1520 IF T<0IF S<200(S)=5
1530 IF T>0GOTO 50
1540 T=1;GOTO 1000
1700 INPUT " ROW";M;INPUT " COL";N;M=10+N+1;RETURN
2000 CLEAR ;FOR I=1TO 8;CY=40;CX=-6+Ib10;PRINT #1,I;NEXT I;FOR I=1TO 8;CX=-5
2010 CY=-49+Ib10;PRINT #1,I;NEXT I;FOR I=12TO 89;IF 0(I)*0GOSUB 2020
2015 NEXT I;RETURN
2020 M=-17+(I-(Ic10)b10)b10
2030 N=-49+(Ic10)b10
2040 BOX M,N,10,10,1;IF 0(I)*3 J=ABS(0(I)-3)b3;BOX M,N,8,J,3
2050 IF 0(I)>3BOX M,N,6,J-2,3
2100 RETURN
3000 FOR I=1TO 100;0(I)=0;NEXT I;FOR I=12TO 18STEP 2
3010 0(I)=2;0(I+11)=2;0(I+20)=2;0(I+31)=3;0(I+40)=3
3020 0(I+51)=4;0(I+60)=4;0(I+71)=4;NEXT I;A=67
3030 GOSUB 2000;GOTO 50

```



## THE GAME PLAYER

... hears dits and dahs with

## MORSE CODE TRAINER

Fred Rodney, Educational  
Software Designs

There have been very few cartridges or cassettes available to Astrocade owners with programs designed specifically to "teach". Fred Rodney, an FCC licensed Radio-Telephone Operator, has designed and made available an excellent and efficient program for learning the International Morse Code.

As some of you are aware, one must know the Morse Code in order to obtain an Amateur ("Ham") Radio Operator license. The FCC requires a person to pass a 5 wpm test for a Novice Class license. This cassette tape program is a "trainer", or, programmable "teacher" of the International Morse Code. With it, one can learn the Code at 5 wpm, 15 wpm, or even 20 wpm, quickly and easily.

Mr. Rodney's MORSE CODE TRAINER can also be thought of as an educational "game" for people interested not just in radio, but also in cryptography or mystery. Before delving any further into the Code, here is a description of the MORSE CODE TRAINER cassettes.

The tape contains two programs. Side one is the Morse Code Trainer and side two is Morse Code II, for advanced study.

Upon loading, a menu appears offering nine study levels. The easiest, level one, teaches the easy letters A,E,I,M,N,O,S,T, and U, while level nine deals with everything at once; the entire alphabet, numerals and punctuation.

Menu two allows the selection of the learning or testing speed: Slow, Moderate or Fast.

Menu three allows the student to choose the "Learn" mode or "Testing" mode. The beginner would select the first level from Menu one, the slow speed from Menu two and the "Learn" mode from Menu three.

In the learning mode, you will hear a character presented as a series of dits and dahs, followed by a visual of the letter or number. For example, with letter F, whose code equivalent is ••—••, you will hear "dit-dit-dah-dit". After one or two seconds, an F will appear on the screen briefly. As a registered Radio Monitor, I can personally attest to the realism of the "dit-dah" sound produced by the Astrocade.

The test mode is designed so the student may determine how much he has learned. Twenty-five characters will be presented by sound only, one at a time, at the speed the person has selected. The person listens, writes down the character being sent and after the test can check his answers by using the study sheet that comes with the cassette.

Side two of the tape is basically formulated the same as side one, with the overall level of study more advanced. It also deals with certain coded messages.

In addition to the tape and detailed study guide, Mr. Rodney has also included a schematic of a simple oscillator, utilizing a 555 chip, that is easily built with parts from your "junk box" or nearest Radio Shack store. With the completed oscillator, one will be able to "send" Morse Code for further practice.

This tape program is very well done. It incorporates ideas used by the U.S. Navy and by professional code instructors. The Code was developed in the mid 1800's by Samuel B. Morse for the U.S. Government. Originally, the Code involved the clicks of a key connected to a telegraph line. With the advent of radio, clicks were replaced by the familiar tonal dits and dahs that are made by keying an electronic oscillator. In radio communications, the Morse Code is superior to voice communications in a number of ways. The Code can be understood in very noisy situations and crowded band conditions. In addition, it only takes a couple of watts of transmitting power to communicate around the world, whereas voice communications usually require at least 200 watts of power and that's on a good day with a superior antenna.

If you are interested in becoming an Amateur Radio Operator, I strongly suggest you begin with Fred Rodney's Trainer tape. It only costs \$9.00, compared to commercially prepared Morse code teaching packages costing \$100.00 or more! Mr. Rodney will also be more than happy to furnish you with additional info on how to obtain a "Ham" radio license. You may order the tape by dialing a 24-hour C.O.D. ordering phone at 212-629-2071, or write to: Fred Rodney, 1190 Albany Ave., Brooklyn, New York 11203.

**MAIL BAG:** This month Joe Adams writes to say he phoned Astrocade about the problem with the Cosmic Raiders cartridge. (Score reverts to 0 after 50,000 pts.) He reports that it was programmed this way. Interesting . . . Joe also bought the Mazeman cartridge and says "it would have been a smash cartridge if some sound effects had been added." (Game has no sound.—Ed.) On that note, Fred Olivas writes "I hope you get in a Mazeman cartridge real soon because I depend on your clear and honest reviews of game quality vs. price." Thank you, Fred. No Mazeman has been received here. Someone wish to let us borrow one for review? . . . MUNCHMAN question from Bruce Veit: "Is another munchman awarded besides the one at 10,00G? Could that be a watermelon after the double lemon run?" How about it gang. Send us the answers, please . . . Uh-oh. Lloyd Friedman of New Jersey warns that "Blastroids-worst game ever." Watch your \$\$\$ folks . . . And finally, Allen Showalter was nice enough to write in to say "Thank you for a great column!" and thank you, Allen! Thanks to all of you who have and continue to write us here at Game Player. Your compliments and praise help keep us going!!!! Our address: Game Player, c/o Michael Proslise, 48-C Ridge Road, Greenbelt, Maryland 20770.

© M.L. Proslise

```

2 .
3 .
6 .PROG. M-II 2/20/82
7 .BY S.KENDALL
8 .EVER CHANGING CROSS
10 CLEAR ;BC=119
20 FOR A=12TO 24STEP 2
30 FOR C=1TO 30
40 B=RND (A)b2
52 FOR D=-50TO .50STEP 10
54 BOX D,0,B,B,3
56 NEXT D
70 FOR E=-30TO 30STEP 10
72 BOX 0,E,B,B,3
74 NEXT E
80 NEXT C
84 FOR W=1TO 600;NEXT W
90 BC=RND (17)b8+116
92 BOX 0,0,158,86,3
100 NEXT A

```

```

2 .
3 .
6 .PROG. M-III 2/23/82
7 . S.KENDALL
10 CLEAR ;BC=119
20 FOR A=12TO 24STEP 2
30 FOR C=1TO 30
40 B=RND (A)b2
52 FOR D=-50TO .50STEP 5
54 BOX D,0,B,B,3
56 NEXT D
70 FOR E=-30TO 30STEP 10
72 BOX 0,E,Bb2,Bb2,3
74 NEXT E
80 NEXT C
84 FOR W=1TO 600;NEXT W
90 BC=RND (17)b8+116
92 BOX 0,0,158,86,3
100 NEXT A

```

68

ARCADIAN

Robert Fabris, skinny  
 3626 Morrie Drive  
 San Jose, CA 95127

the SOURCE TCD 959

|                                                                                     |
|-------------------------------------------------------------------------------------|
| <b>FIRST CLASS</b><br>U S POSTAGE<br><b>PAID</b><br>Sunnyvale, CA<br>Permit No. 931 |
|-------------------------------------------------------------------------------------|

LOWERCASE = 1-BYTE KEYPAD WORDS, UNDERScores  
= SPACES. 680 CHARACTERS

```

3  .OLD_GLORY
4  ._ED_G
10 NT=8;%(10)=0;%(9)=50;BC=122;gosub 170
20 NT=0;clear ;%(0)=7;%(1)=7;%(2)=88;%(3)=8;
   %(9)=0;%(10)=180;K=0
30 A=20200;W=7723;X=-22013
35 Y=17988
40 for G=0to 1440step 240;gosub 200
50 next G
60 W=3115;X=-235;G=0
70 gosub 200
80 W=299;X=-4095;Y=Y+80
90 for G=0to 640step 160
95 for K=0to 5;gosub 200
96 next K
100 K=0;next G
110 Y=Y+81
120 for G=0to 480step 160
125 for K=0to 4;gosub 200
126 next K
130 K=0;next G
140 CY=40;print "-----OLD_GLORY-----
      1984-
160 for Z=0to 5000;next Z;run
170 print "5000504330+23300000+2330+23503540
00200220+1220+1240000032350060002000
180 BC=7;print "00x50x50x4x3x30+x2x3x300000+
x2x3x30+x2x3x4x3x27x2000
190 BC=240;print "x10x10x107x1-x30x2x1U000_0
x1x2x3x5x1x2x3x556x3x2000x1
195 BC=7;return
200 Z(A)=-43
210 Z(A+2)=W
220 Z(A+4)=X
230 Z(A+6)=Y+G+2xK
240 Z(A+8)=-13871
250 CALL_A;return

```

Ed Groebe  
12046 Flambeau Dr.  
Palos Heights, IL 60463

OLD GLORY, above, was written by Ed Groebe some time ago, and appeared in Vol 4, page 77. While written in Bally Basic, it also works in AstroBasic (that we now have) but our music expert, George Moses, made a couple of small modifications to get the music to sound right.

MOSTLY PROGRAMS THIS ISSUE, making up a little for earlier, shorter issues. Five, in fact - three contest contenders, plus two that reflect the season-Flags.

LOWERCASE = 1-BYTE KEYPAD WORDS, UNDERScores  
= SPACES, 1760 CHARACTERS

```

1 goto 100
2 for L=1to 2000:next L:return
3 NT=0:CX=57:return
4 NT=T:return
5 gosub 3:input "SPEED? (1-9):" T:if T>0:if T<
10:clear :gosub 3:input "REPEITIONS? (1-9):" R
:if R>0:if R<10:clear :return
6 clear :goto 5
7 CX=57:return
8 gosub 3:TV=X:print " =":gosub 4:for B=1to
R:gosub 7:gosub CX:next B:gosub 2:clear :return
n
32 print " " :return
34 print "1_100_1_1_100_1_ " :return
39 print "1_100_100_100_100_1_ " :return
40 print "100_1_100_100_1_100_ " :return
44 print "100_100_1_1_100_100_ " :return
45 print "100_1_1_1_100_ " :return
46 print "1_100_1_100_1_100_ " :return
47 print "100_1_1_100_1_ " :return
48 print "100_100_100_100_100_1_ " :return
49 print "1_100_100_100_100_ " :return
50 print "1_1_100_100_100_ " :return
51 print "1_1_1_100_100_ " :return
52 print "1_1_1_1_100_ " :return
53 print "1_1_1_1_1_ " :return
54 print "100_1_1_1_1_ " :return
55 print "100_100_1_1_1_ " :return
56 print "100_100_100_1_1_ " :return
57 print "100_100_100_100_1_ " :return
58 print "100_100_100_1_1_1_ " :return
59 print "100_1_100_1_100_1_ " :return
63 print "1_1_100_100_1_1_ " :return
65 print "1_100_ " :return
66 print "100_1_1_1_ " :return
67 print "100_1_100_1_ " :return
68 print "100_1_1_ " :return
69 print "1_ " :return
70 print "1_1_100_1_ " :return
71 print "100_100_1_1_ " :return
72 print "1_1_1_1_ " :return
73 print "1_1_1_ " :return
74 print "1_100_100_100_ " :return
75 print "100_1_100_ " :return
76 print "1_100_1_1_ " :return
77 print "100_100_ " :return
78 print "100_1_ " :return
79 print "100_100_100_ " :return
80 print "1_100_100_1_ " :return
81 print "100_100_1_100_ " :return
82 print "1_100_1_ " :return
83 print "1_1_1_ " :return
84 print "100_ " :return
85 print "1_1_100_ " :return
86 print "1_1_1_100_ " :return

```

```

87 print "1_100_100_ " :return
88 print "100_1_1_100_ " :return
89 print "100_1_100_100_ " :return
90 print "100_100_1_1_ " :return
100 clear :print :gosub 3:print "MORSE_CODE_
PRACTICE
110 print :gosub 3:print "1. ALPHABET":gosub
3:print "2. NUMBERS":gosub 3:print "3. PUNCT
UATION":gosub 3:print "4. RANDOM_GROUPS":gosu
b 3:print "5. CUSTOM
115 print :gosub 3:input "SELECTION? (1-5):"
M:if M>0:if M<6:clear :gosub 5:goto 110:M:10
116 clear :goto 100
120 for A=65to 90:X=A:gosub 8:next A:goto 10
0
130 for A=48to 57:X=A:gosub 8:next A:goto 10
0
140 for A=0to 9:X=*(A):gosub 8:next A:goto 1
00
150 gosub 4:for A=10to 14:*(A)=rnd (26)+64:n
ext A:for A=15to 19:*(A)=rnd (10)+47:next A:if
or B=1to R:clear :for A=10to 19:gosub 7:gosub
*(A):next A:gosub 2:next B
151 SM=1:gosub 3:print "PRESS GO":B=KP:if B=
13:gosub 3:for A=10to 19:TV=*(A):next A:gosub
2:gosub 2:gosub 2:SM=0:goto 100
152 goto 151
160 gosub 3:print "input 9: ",:for A=10to 18
:Y=KP:TV=Y:*(A)=Y:next A:gosub 2
161 for B=1to R:CY=32:for A=10to 18:gosub 4:
gosub 7:gosub *(A):next A:gosub 2:next B:goto
100

```

John Hedstrom  
814 E. Illinois  
Wheaton IL 60187

MORSE CODE PRACTICE will enable you to brush up on your code. The timing has been adjusted to accepted standards. You can select between given categories including a "custom" selection.

# astrocade/UNDERGROUND

I would like to thank all of the People who ordered from us in the Past month. However, we still have a large number of Games which we would like to Pass on to you at a substantial savings.

To start things off, we are continuing our exclusive L&M Software Super Sale. This time around we are offering the following cassettes (AstroBASIC only).

|          |                                 |        |
|----------|---------------------------------|--------|
| TaPe #5  | Search & Destroy/Air Raid       | \$5.00 |
| TaPe #6  | Star Base 2000/Space Quest 2001 | \$5.00 |
| TaPe #17 | Nautilus                        | \$7.50 |

It now appears that the rebirth of Astrocade is just around the corner, so now is the time to stock up on the following fine software from Astrocade.

|                 |                   |                     |
|-----------------|-------------------|---------------------|
| # 2011          | Galactic Invasion | \$29.95 now \$1.95  |
| # 2012          | Space Fortress    | \$29.95 now \$12.95 |
| # 6004          | AstroBASIC        | \$59.95 now 29.95   |
| # 4004          | Biorhythm         | \$29.95 now \$4.95  |
| # 2010          | DogPatch          | \$29.95 now \$4.95  |
| # 3002          | Football          | \$29.95 now \$12.95 |
| **Dealer Demo** |                   | \$29.95 now \$1.95  |

We also carry a complete line of accessories for the Astrocade including Hand Controllers, Blank Tapes, and a limited amount of Parts.

ABC also has all of the newest in Software for the Astrocade. Including such favorites as Sneaky Snake, Muncher, Ms.Candyman, Sea Devil, Solar Conqueror, and Cosmic Raiders. Just give us a call to get the latest information. Also request your copy of the free Astrocade newsletter. Anytime that you Place an order your name is Placed on our mailing list so you can continue receiving our newsletter.

We try to make it as easy as Possible to order from us. Just Give us a call or drop us a line letting us know what you need. Please no collect calls and also no calls on Wednesday. However, we do have a 24-hour ordering line so you may call anytime after operating hours. Please add \$1.50 for shipping and handling on each order(\$2.50 to Canada). VISA and Master Card are accepted.

ABC Hobbycraft  
2155 East Morgan Ave.  
Evansville, IN 47711  
(812)477-9661

June 30, 1984

## FRUSTRATION FORTRESS

## ARCADIAN

Vol. 6 No.8

LOWERCASE = 1-BYTE KEYPAD WORDS, UNDERSCORES  
= SPACES. 1778 CHARACTERS

```

1 goto 1000
2 for A=0to 999:next A:return
3 # (9)=1:rnd (45):N:gosub 6:ID=X:J=E:rnd (2
7):H:gosub 6:E=X:J=K(9)
4 box D=1,E,3,3,3:box D=1,E,1,1,3:box D+2,E,
3,1,3:box D+3,E=1,1,1,3:return
5 S=S+(LX):return
6 I=rnd (3)-2:if I=return
7 goto 6
8 for A=8to 2step -1:NT=S*H:U=K(A):next A:NT=
0:return
9 F=rnd (7)-4:12:return
10 box X,Y,6,6,3:return
11 box 0,0,15,11,2:return
12 gosub 11:CX=-36:print "YOU MADE IT!" :CX=-
27:print #0,"BONUS!",CX:R=S+S+CX:R:goto 2
20 X=X+(-I*2)+(JX(1)*8):if ABS(X)<67:Y=2+(J
Y(1)*8)
30 return
60 gosub N:VA=15:TA=rnd (100)+50
70 gosub 20:if V:goto 82
75 V=(ABS(X)<67):if V:box X,4,(0),2,N,1:box
-K,4,(1),2,N,1
80 if V=0:if Y=K(I>0):if ABS(X)>73:X=X+74:K+74
82 if V:if ABS(X)>67:X=X+68:K+68
85 if ABS(Y)>35:Y=Y+36:K+36
90 V:gosub N
100 if ABS(D-X)<5:if ABS(E-Y)<5:for B=2to 8:NT
=9:MU=K(B):next B:NT=0:gosub 4:gosub 3:goto 2
50
110 if rnd (15+R)>15-R:gosub P:if T:goto 1010
120 goto 0
200 box 0,0,15,11,2:CY=0:CX=(ZCN)*3-2:print
#0,Z,box 0,0,15,11,3:return
250 Z=Z-1:L=L+1:if Z:gosub 200:goto 0
310 gosub M:gosub 420:C=C+5:R=R+1:if R>4C=5X
rnd (4)+2
320 if R(N)=R+4:if R=0G=2+Z:gosub 8
330 if S>K(11)+500K(11)=S:G=G+5:gosub 8:gosub
b 8
340 Z=C:goto 1010
350 T=0:J=rnd (13)-7:6:if (J=K(0))+(J=K(1))
:goto P
360 FC=125:box 0,J,134,1,3:BC=9
370 for B=25to 45step -1:TA=B:TB=B+5:NH=1:NVA=
100:VA=B+3:VB=VA+2:next B:if BC=W:if ABS(Y-J)<
4:goto 400
390 box 0,J,134,1,3:FC=U:return
400 BC=93:FC=9:VA=15:VB=15:for A=52to 100:TA
=A:TB=A+5:VR=N:VF=0:next A:if T=1
410 G=G-1:gosub 11:CX=-18:print "GOT YOU!" :g
osub 2
415 if Z=0=C
420 clear :gosub 5:CY=0:CX=-60:print #0,"ROU
ND!", "SCORE!",S:CY=N:CX=-18:print #0,"ME
N!",G:L=0:if G:goto 2
430 CY=-32:CX=CY:print "GAME OVER!"
440 for A=16to 23:if S(A)run
450 next A:goto 440
550 gosub 200:gosub 4:box -75,K(0),N,N,2:box
75,K(1),N,N,2
560 gosub N:gosub 20:if ABS(K(0)-Y)<4:if X<K
:goto 590
565 VA=15:if A=75to 60step -1:TA=A:next A:if
:if rnd (3)-2:gosub N:gosub P:gosub N:if T:goto
1010

```

```

570 if ABS(K(1)-Y)<4:if X>=K:goto 590
580 gosub N:goto 560
590 gosub 12
600 U=U+32:W=U-60:if W>250U=58:goto 600
650 gosub 5:return
1000 1(9)=1:C=15:H=0:K=-75:L=0:M=550:N=10:P
=350:Q=60:R=15:O=U-59:W=-1:Z=C:G=N
1010 clear :I=0:BC=W:FC=U:box 0,0,158,86,1:box
0,0,140,77,2:for A=36to 36step 12:for F=4
to 8step 2
1020 box K,A,F,F,3:box K+4,A,8,2,3:if A<36bo
x -K,A+6,F,F,3:box 71,A+6,8,2,3
1030 next F:next A:gosub 9:box K+2,F,12,10,2
:K(0)=F:gosub 9
1040 if F+6>30:gosub 9:goto 1040
1050 box 73,F+6,12,10,2:K(1)=F+6:gosub 200
1060 gosub 3:gosub 6:Y=K(I>0):X=I+73:gosub N
:goto 60

```

Load program as listed. Then load the #() strings with the following numbers:

#(2)=48:(3)=48:(4)=58:(5)=52:(6)=56:(7)=58:(8)=56  
#(1)=0

## HOW TO PLAY:

This is a 1 player game. The object is to get all of the keys in each room without getting hit by any of the randomly firing Laser Cannons. To move, use J,K,Y,I. TR & NH have no effect. To get a key, all you have to do is touch it with the Blinking Box (your piece).

## SCORING:

1 point times the Round number is given for each key. If you successfully finish getting the keys in a room, you must then go out the nearest doorway. Make sure that you are completely within the door when you try to get out. If you're not, you must reenter the room, line yourself up, and try again. If you lose your man trying to get out (8 keys left) you will have to do the entire room again! Otherwise if you lose a man, you will go back to the point that you left the last rack.

## EXTRA MEN:

You are awarded 2 extra men for completing the 3rd round, and each 4 after that. You get 5 men each time you get 500 points.

## CAUTION:

SZ=23 when this game is complete. Because it uses 11 #() string locations, you don't have any room to add mistakes!

## GOOD LUCK!

Ken Lill  
6608 S. Campbell  
Chicago, IL 60629

Dear Sirs,

I am a student in high school in Cleveland, Ohio. I am greatly interested in the field of computer programming. I have purchased the Bally Arcade system and the Bally Basic cartridge for basic programming. I have a number of questions referring to the learning course booklet included with the cassette.

On page 97 is a routine entitled "Decimal to Hex Converter". Please explain the value and uses of the hexadecimal system. On page 98 is a Character Code Table (Appendix A). Please explain to me the use of this table. On page 99 is Appendix 3 having to do with bus and connector structure. Please explain the use of this (even if it may be insignificant), and the Astro signals. On page 100 a light pen connector port is mentioned. Please inform me the use of this piece and how I may obtain, and what it will do. Page 101 is about a system memory map. I would like to know about this system and how I can work this on my unit. Page 102 has Appendix D. I'm sure if you explain what it is I can figure out how to use it. On page 103 is Appendix E. I would appreciate knowing of this and how it may be useful to me. On page 115 is another list that could be helpful to me, if I know how to use it. Please send me a list of books or attachments and a price list of material I can order.

Thank you for your time.

Yours truly,  
Doug Dunyan Jr.

Doug,

I will try to briefly answer your questions in the order that you wrote them. The value of the Hexadecimal system is in programming in machine language. The Z80 microprocessor contained in your Arcade can be programmed in its own language which uses hexadecimal (base 16) numbers as its command words. You are more accustomed to using decimal numbers (base 10).

Page 98 The Character Code Table is very important in doing word processing or in storing letters in memory as numbers, which your computer understands. Refer to pages 38 & 39 of the manual for a more complete explanation "Storing Text in Arrays."

Page 99 Bus & Connector Structures refers to the signals present

on each of the pins on the 50 pin connector in the back of your Arcade. These signals are only important if you are going to build your own memory expansion to plug into the Arcade.

Page 100 Lite Pen Connector Port is on the right rear of your Arcade. It provides a 5 volt power supply for a lite pen that will allow you to draw on the screen or choose menu items by touching the screen with the lite pen. Two members of the B.U.G.S. have developed lite pens that work, but no one has found it economical to produce one as yet. Stay tuned!

Page 101 System Memory Map shows the addresses in hexadecimal where different parts of the operating system are stored. If you know where these commands are you can call them and get them to work for you doing graphics, sounds and storing and moving large amounts of info at high speed. To learn how to peek and poke into screen ram which is the memory you can manipulate, study Lesson 10 on music and subscribe to The Arcadian users newsletter.

Page 102 Input and Output Ports diagrams the numbers of the ports through which you can input data to your computer (input ports) and those through which the computer outputs data to the screen and loudspeaker (output ports). For more information order the Bally Basic Hacker's Manual from The Arcadian. For a demo of these ports in a program see the bottom of page 114 (3) The Direct Use of Sound Ports & (16) thru & (23). Also, see Mike Peace's excellent "Sound Port Study" on page 88.

Page 103 Appendix E tells you where everything is stored in the AstroBasic cartridge by address. An ideal tutorial to read on peeking and poking into these areas is to be found in Volume I page 78 of The Arcadian, "Using the Bally Basic Text Area" by Dave Ibach.

Page 115 is a simple list of what you have bought in your computer: Memory; Inputs; Output Graphics; Output Audio, etc.

Contact The Arcadian, 3626 Morrie Drive, San Jose, CA 95127 for the monthly newsletter that will make a real hacker out of you in no time!!!

Sincerely,  
GEORGE MOSES

WE HAVE REPRINTED this page from the Astrobugs newsletter (with permission) because it has some comprehensive answers to most of the questions that have been received.

LOWERCASE = 1-BYTE KEYPAD WORDS, UNDERScores  
= SPACES. 1789 CHARACTERS

```

1 clear ;CY=0;CX=-40;print 'ALIEN_2000
4 print ;input '_input $ _OF_PLAYER'S_(1-4)*F
;if F>4goto 1
5 E=2;H=1;S=2;Y=0;for G=1to F;E(G)=0;next G;
gosub 617
6 for Y=1to F
7 G=Y;K=2
19 FC=0;clear ;for Z=1to 50;box rnd (150)-75
,rnd (40)+20,1,1,next Z
20 I=50;box I,-28,10,1,1;box I,-30,10,1,1;bo
x I,-32,10,1,1;box I,-34,10,1,1
21 box -15,-33,10,9,3;box -50,-31,12,8,1;box
0,-43,160,3,1;for X=-80to 79step 3;box X,-38
,rnd (5),3+rnd (6),1;for N=1to 2
22 box X,-32-rnd (9),1,rnd (2),2;next N;next
X
23 W=rnd (10)-110
25 C=-10;B=0;CY=42;print '_PLAYER',#3,G,#6,E
(G);FC=127
26 Q=rnd (90)-65
40 W=W+K+rnd (5)
41 if W>70W=-70
42 if K=30_H=rnd (2)
50 M=rnd (27)-10
100 box 0,-3,160,48,2
110 box W,M,8,1,H
120 box W,M,2,3,H
124 if W-Q<4if W-Q>-4;J=2;goto 530
125 if W=Igoto 530
126 NT=-1;$(16)=255;$(20)=78;$(21)=77;$(23)=
68
250 if TR(Y)=0goto 26
251 U=KN(Y)+2
252 line 17,-32,4
254 V=M
280 line U,V,3
281 line 17,-32,4
282 line U,V,2
300 if U-W<3if U-W>-4;NT=-0;goto 400
310 goto 26
400 NT=-1;$(16)=69;$(17)=9;$(18)=5;$(19)=3;$(
20)=4;$(22)=11;box W,M,1,6,3;box W,M,2,2,3;b
ox W,M,7,3,3;box W,M,9,2,3
401 BC=120
402 box W,M,3,10,3;box W,M,8,8,3;box W,M,12,
6,3;box W,M,14,3,3
403 BC=0;FC=7
404 box W,M,4,12,3;box W,M,10,10,1;FC=120;bo
x W,M,14,8,1;box W,M,16,4,1;box W,M,18,18,2;F
C=135;NT=-0

```

Henry Sopko  
2705 King Street East #110  
Hamilton, ON CANADA  
L8K 1Y4



```

494 @G)=@G)+10;S=S+2
496 K=K+E;if K=30E=0
497 goto 23
530 box 0,-3,160,48,2;for T=Mto Cstep -2;box
    W,T,8,1,3;box W,T,2,3,3;box W,T,8,1,3;box W,
    T,2,3,3;next T;box W,T,8,1,1;box W,T,2,3,1
531 if B=1;goto 616
532 NT=-1;%(16)=10;%(17)=66;%(18)=117;%(19)=
    66;%(20)=1;%(21)=165;%(22)=125;for R=Tto 24st
    ep 2;box W,-R-15,R,1,1;next R
533 for R=Tto 24step 2;box W,-R-15,R,1,2;nex
    t R
534 if W=Igoto 600
535 for O=-Sto 5
540 line W,-40,0
550 line O;rnd (7)+W,-35+rnd (10),2;%(17)=78
    ;%(18)=19;%(19)=32;%(21)=221;%(22)=126;%(23)=
    255
566 next O
567 NT=-0
598 @G)=@G)-J;goto 25
600 for W=1to 2;for P=1to 20step 6;FC=7;FC=1
    38;BC=7;BC=0;FC=135;box 50,-30,P,3,3;box 50,-
    30,3,P,3;next P;NT=-0
601 for P=20to -20step -6;FC=35;box 50,-30,P
    ,P,3;BC=7;box 50,-30,P,P,2;BC=0;FC=7;next P;F
    C=135
602 next W
613 CY=-5;print "_NCLR_PLANT_DESTROYED";prin
    t ;print "___ALIEN__LANDING!!!";for A=1to 999
    ;next A
614 C=-38;W=50;B=1;goto 530
616 E=2;H=1;S=2;next Y
617 cclear ;for G=1to Fiprint "_PLAYER",#3,G,
    #6,@G);next G;if Y>Fgoto 700
618 for O=1to 999;next O;return
700 CY=0;print "_FULL_TR(1)_TO_START_AGAIN";
    if TR(1)=0goto 700
701 goto 5

```

THIS MONTH'S CONTEST WINNER! This is a shoot-em-up game where the Alien cruises across the sky above the City, and you must try to get some good hits on him before he drops bombs. Has some cute graphics.

```

1 .
2 .
3 .AMERICAN FLAG
4 .
10      CLEAR ;NT=0;FC=230;GOSUB 120
20 CALL20280
30 Y=38;A=75;D=3
40 FOR Y=YTO -5STEP -5
50 D=-D
60 FOR X=-A+DTO -18STEP 12
70 BOX X,Y,5,4,1;BOX X,Y,5,2,3;BOX X,Y,3,4,3
80 BOX X,Y-1,1,1,3;BOX X,Y+2,1,2,3
90 NEXT X;NEXT Y
100 &(2)=156;&(3)=156
110 GOTO 110
120 A=20200;C=600
130 X=20202;GOSUB C
140 X=-6715;GOSUB C
150 X=245;GOSUB C
160 X=11809;GOSUB C
170 X=32334;GOSUB C
180 X=3782;GOSUB C
190 X=9031;GOSUB C
200 X=-18434;GOSUB C
210 X=2616;GOSUB C
220 X=-20275;GOSUB C
230 X=15904;GOSUB C
240 X=30471;GOSUB C
250 X=20399;GOSUB C
260 X=2840;GOSUB C
270 X=-14722;GOSUB C
280 X=-431;GOSUB C
290 X=14426;GOSUB C
300 X=-10750;GOSUB C
310 X=30626;GOSUB C
320 X=-11441;GOSUB C
330 X=-11520;GOSUB C
340 X=30721;GOSUB C
350 X=25598;GOSUB C
360 X=1592;GOSUB C
370 X=-11345;GOSUB C
380 X=30985;GOSUB C
390 X=536;GOSUB C
400 X=2110;GOSUB C
410 X=1235;GOSUB C
420 X=1491;GOSUB C
430 X=-392;GOSUB C
440 X=14519;GOSUB C
450 X=15878;GOSUB C
460 X=-11503;GOSUB C
470 X=-20727;GOSUB C
480 X=11079;GOSUB C
490 X=-11401;GOSUB C
500 X=-3825;GOSUB C
510 X=-15903;GOSUB C
520 X=-13829;GOSUB C
530 X=16115;GOSUB C
540 X=-4786;GOSUB C
550 X=15943;GOSUB C
560 X=-11288;GOSUB C
570 X=-1267;GOSUB C
580 X=201;GOSUB C
590 RETURN
600 X(A)=X;A=A+2;RETURN
610 X=0;GOSUB C

```

ANOTHER FLAG PROGRAM relies on multiple POKES to get its graphics display onto the screen. Double check each line before GO-ing it as you enter the program.

Rusty Elommaert  
2901 Willens Drive #6  
Melrose Park, IL 60164

## THE GAME PLAYER

is psychoanalyzed . . .

- 1) ASTRO ANALYST
- 2) MEMOMAX  
Fred Rodney Educational  
Software Systems

It's been raining for five days now, so we thought we would cue-up some good rainy-day games. We recently received a cassette tape from Fred Rodney that contains two excellent game programs perfect for these rainy days.

ASTRO ANALYST is a one-player game in which the computer will list personality traits (ie. quiet, logical, sensitive, shy, etc.) based on how you answer the unique program. This computer program is based on an actual psychological exam that presents the person with a choice of symbols. The symbols selected by the person are interpreted by the computer according to the formula programmed into it for doing so, and results in a list of personality traits after all thirteen selections have been made.

According to Mr. Rodney, the "program was originally written as a writer's test. The examinee's answers were then tallied by an examiner and evaluated by a certified expert in the field of symbols and psychology.

For example, in each case you are asked to select via the keypad, one of three symbols, such as or or . Your selection theoretically is indicative of a particular trait, such as "assertive" for example.

ASTRO ANALYST was written with the help of a person well versed in psychology and symbol interpretations. Personally, I found the program fascinating, and a good cut above other simple "fortune telling" games.

ON SIDE TWO of this cassette tape is a one player game called MEMOMAX. This game plays just like the popular hand-held "Merlin" game. MEMOMAX is a memory game, of course, in which the player tries to memorize a series of positioned arrows. There are four arrows; one pointing north, east, south and west. The computer will flash one of them, along with an accompanying tone. The player, using the hand controller, makes the same arrow flash. In round two, the computer will flash a series of two arrows. You must flash the same two in order. Round three presents three arrows, round four gives a four arrow sequence, and so on, until eventually the player cannot remember the order in which the arrow symbols were presented. One false choice and the game ends, with a skill rating presented.

We found MEMOMAX to be a nice, quiet game that should keep you pleasantly occupied for awhile.

Together, ASTRO ANALYST and MEMOMAX make a good cassette-game bargain, particularly since the tape sells for a very reasonable price of \$9.00. It should make a good addition to anyone's collection. For ordering information see last month's Game Player column in the ARCADIAN, or look for a Fred Rodney advertisement in this issue.

**MAIL BAG:** From the "that's-the-way-it-goes" department, our most recent SCOREBOARD is actually a few months old. We apologize for the delay and problems in getting it published. Please keep the faith and mail in your scores...Craig Conner writes to say that he thinks "the column (Game Player) is great and enjoys reading it. It helps in making future choices." Craig's favorite tape is "Look out for the Bull"... Herb Mathews writes to say "Thanks for the consistent high quality and informative nature of your monthly reviews. It has definitely influenced my software purchases..." Herb loves Super Slope and feels it would be terrific as a cartridge...Fred Rodney would like to know if any of you Treasure Cove owners can list the creatures beyond level 10-12 that appear. Let us know. And hey...PLEASE write to us. Without your support, the Game Player column will cease.

© M.L. Prosise 1984

## SCOREBOARD

High scores for the period Feb. 9 to Mar. 14

## Cartridges:

|                           |            |               |
|---------------------------|------------|---------------|
| Cosmic Raiders (Skill 9)  | 11,150*    | George Moses  |
| Bally Pin I               | 320,430    | Don Gladden   |
| Bally Pin II              | 336,700    | Stan Kendall  |
| Wizard (Skill 1)          | 453,200    | Stan Kendall  |
| Ms. Candyman (Skill 1)    | 265,122*   | Craig Conner  |
| Ms. Candyman (Skill 2)    | 181,170*   | Fred Rodney   |
| Ms. Candyman (Skill 3)    | 61,578*    | Craig Conner  |
| Pir. Chase (Skill 1)      | 4,100,641* | Stan Kendall  |
| Pir. Chase (Skill 9)      | 705,284    | Peggy Gladden |
| Space Invaders            | 7,045      | Stan Kendall  |
| Muncher                   | 76,310*    | Sharon Adams  |
| Solar Conqueror           | 23,957*    | D. Berceille  |
| Sea Devil                 | 177,850    | Eric Allen    |
| Treas. Cove (Tour. level) | 32,817*    | David Krec    |
| Sneaky Snake              | 56,457*    | Joe Adams     |
| Blast Droids              | 14,350*    | Fred Olivas   |
| Brickyard (Sk. 1, 5 bls.) | 1,722*     | Kelly Prosise |

## Cassettes:

|                       |         |              |
|-----------------------|---------|--------------|
| Look out for the Bull | 12,996* | Craig Conner |
| Dungeons of Dracula   | 3,440   | Al Showalter |
| Exitor                | 31,575  | Fred Olivas  |
| Yahtzee (2 player)    | 348     | Peg Williams |

\* Indicates a new high score

**NOTES** Quite a few new high scores this month... The females are holding on to the Muncher score--Last month's winner Melinda Mullen lost out to Sharon Adams this month... Special congrats to Fred Rodney for his exceptionally good score of 181,170 at level TWO of Ms. C.! Well done Fred!

**NEWS:** Starting next month we will have a new scoreboard lay-out that hopefully will incorporate all of your suggestions for improvement. We think you'll like it!

**HELP:** Response to Scoreboard is growing. However, there isn't room to print every high score at every skill level of every game. Many games have 10 skill levels. What should we do? Help us by letting us know how this situation should be handled. Obviously we are going to have to decide what games are eligible and what skill levels are eligible.

For sale: Astrocade with two controllers, plus an excellent set of cartridges: ABasic, Muncher, Solar Conqueror, Cosmic Raiders, Treasure Cove, Wizard, Artillery Duel, plus 6 more; also includes Vols. 1-6 of the Arcadian; \$350 obo. Steve Fonteno, 1410 Alhambra Road, So. Pasadena, CA 91030 (818) 799-1512

\*\*\*\*\*  
MEMBERS WANTED FOR NIAGARA REGIONAL B.U.G.  
-----

NO EXPERIENCE REQUIRED. JUST ENTHUSIASM, INTEREST, AND A NOMINAL FEE. (BUGS HAVE TO EAT, TOO!) JOIN UP FOR PROJECTS, PROGRAMS, NEWS, AND ANSWERS TO ALL THE QUESTIONS YOU EVER WANTED TO ASK! IF WE CAN'T ANSWER YOUR QUESTION, WE'LL KEEP IT ON THE EDGE OF THE DESK AND THE TIP OF OUR TONGUES UNTIL WE CAN! TO JOIN SEND QUESTIONS, INFO ON YOUR SYSTEM, ETC., ALONG WITH \$7.00 (CHEQUE OR MONEY ORDER) TO: NIAGARA REGIONAL B.U.G., 6 WOOD-DALE DR., ST. CATHARINES, ONTARIO, CANADA, L2T 1Y8. ENTER OUR DRAW FOR 2 FREE CARTRIDGES!

\*\*\*\*\*

ASTRO-BASH COMING UP SOON! Yes, another of those two-day get-togethers will be upon us in just a few short weeks. The scheduled date is August 5, with some of the real die-hards showing up the day before. Contact Don Madden, at 313-437-3984, for details. Games, contests, seminars, all kinds of Astrocade information and supplies. Appearances by famous software and hardware personalities. Lots of fun, just like last year!!!

78

ARCADIAN

Robert Fabris, superlate  
3626 Morrie Drive  
San Jose, CA 95127

the SOURCE TCD 959

FIRST CLASS  
U. S. POSTAGE  
PAID  
Sunnyvale, CA  
Permit No. 931

CONNECT FOUR was originally published in the August 1980 issue of Cursor newsletter. We do not have Mr. Leake's current address, and no one has been able to locate the Cursor's publisher since early 1982. We may publish other programs of quality that have appeared in the Cursor (later called Basic Express) newsletter.

MORSE CODE ADDITIONS: SPEEDS 1 - 9 correspond to 36,24,18,14,12,10,9,8,7 words per minute. In the CUSTOM mode, 9 characters are needed to make an entry. If your item has only six characters, then add 3 spaces to fill out the required 9. The PUNCTUATION selection requires 10 array values, to be added by the following input:

FOR A= 0 TO 9; PRINT A; INPUT \*(A); NEXT A

Then enter the following data to fill up that array:  
46,44,63,45,40,58,59,34,39,47

HOLE #1 PAR 4 600 YD. WIND: ↑ 20 MPH

| PLAYER'S | SCORES |
|----------|--------|
| PAR=0    | OVER   |
| 1 - 0    | 0      |
| 2 - 0    | 0      |
| 3 - 0    | 0      |
| 4 - 0    | 0      |



CLUB:1 WOOD JYC(1)

Fairway Screen Dump

HOLE #1 PAR 4 620 YD. WIND: ← 20 MPH (ADVT.)

| PLAYER'S | SCORES |
|----------|--------|
| PAR=0    | OVER   |
| 1 - 0    | 0      |
| 2 - 0    | 0      |
| 3 - 0    | 0      |
| 4 - 0    | 0      |



CLUB:9 PUTTER JYC(1)

Green Screen Dump

### ARCADE GOLF By GAMBITS

FOR 16K & 32K BLUE RAM BASIC 1.1 EXTENDED RAM UNITS.  
1 TO 4 PLAYERS 1 TO 4 HAND CONTROLS

No BANG-BANG SHOOT-EM-UP Here! Just your choice of 9 or 18 holes of GOLF!

EACH HOLE IS DIFFERENT — EVERY TIME!

THERE ARE TREES, SAND TRAPS, A LAKE, AND AN ALWAYS CHANGING WIND.  
WITH THE WIND GUSTING UP TO 25 MPH, YOUR BALL MAY BE BLOWN OFF IT'S COURSE.  
TRY TO BREAK PAR. IT ISN'T AS EASY AS YOU MIGHT THINK!

YOUR COST - POSTAGE PAID - IS ONLY \$7.95 U.S. DOLLARS! PLEASE SEND ONLY A CHECK (SLOWER RESULTS), OR A MONEY ORDER. THIS COST IS NO WHERE NEAR THE 'GREEN' FEES ON MOST GOLF COURSES FOR ONLY 1 PERSON PLAYING ONLY 1 GAME!  
AND JUST THINK, YOU DON'T EVEN HAVE TO LEAVE YOUR COZY CHAIR!

MAIL TO:

KEN LILL  
6608 S. CAMPBELL  
CHICAGO, ILLINOIS 60629

PLEASE ALLOW 2 WEEKS FOR DELIVERY

CONNECT FOUR was originally published in the August 1980 issue of Cursor newsletter. We do not have Mr. Leake's current address, and no one has been able to locate the Cursor's publisher since early 1982. We may publish other programs of quality that have appeared in the Cursor (later called Basic Express) newsletter.

MORSE CODE ADDITIONS: SPEEDS 1 - 9 correspond to 36,24,18,14,12,10,9,8,7 words per minute. In the CUSTOM mode, 9 characters are needed to make an entry. If your item has only six characters, then add 3 spaces to fill out the required 9. The PUNCTUATION selection requires 10 array values, to be added by the following input:

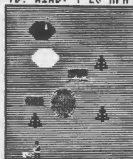
FOR A= 0 TO 9; PRINT A; INPUT \*(A); NEXT A

Then enter the following data to fill up that array:  
46,44,63,45,40,58,59,34,39,47

HOLE #1 PAR 4 600 YD. WIND: ↑ 20 MPH

| PLAYER'S | SCORES |
|----------|--------|
| PAR=0    | OVER   |
| 1 - 0    | 0      |
| 2 - 0    | 0      |
| 3 - 0    | 0      |
| 4 - 0    | 0      |

CLUB: 1 WOOD JY(1)



Fairway Screen Dump

HOLE #1 PAR 4 620 YD. WIND: ← 20 MPH

| PLAYER'S | SCORES |
|----------|--------|
| PAR=0    | OVER   |
| 1 - 0    | 0      |
| 2 - 0    | 0      |
| 3 - 0    | 0      |
| 4 - 0    | 0      |

CLUB: 9 PUTTER JY(1)



Green Screen Dump

ARCADE GOLF  
By GAMBITS

FOR 16K & 32K BLUE RAM BASIC 1.1 EXTENDED RAM UNITS.  
↑ TO 4 PLAYERS                      ↑ TO 4 HAND CONTROLS

No BANG-BANG SHOOT-EM-UP Here! Just your choice of 9 or 18 holes of GOLF!

EACH HOLE IS DIFFERENT — EVERY TIME!

THERE ARE TREES, SAND TRAPS, A LAKE, AND AN ALWAYS CHANGING WIND. WITH THE WIND GUSTING UP TO 25 MPH, YOUR BALL MAY BE BLOWN OFF ITS COURSE. TRY TO BREAK PAR. IT ISN'T AS EASY AS YOU MIGHT THINK!

YOUR COST - POSTAGE PAID - IS ONLY \$7.95 U.S. DOLLARS! PLEASE SEND ONLY A CHECK (SLOWER RESULTS), OR A MONEY ORDER. THIS COST IS NO WHERE NEAR THE 'GREEN' FEES ON MOST GOLF COURSES FOR ONLY 1 PERSON PLAYING ONLY 1 GAME! AND JUST THINK, YOU DON'T EVEN HAVE TO LEAVE YOUR COZY CHAIR!

MAIL TO:  
KEN LILL  
6688 S. CAMPBELL  
CHICAGO, ILLINOIS 60629

PLEASE ALLOW 2 WEEKS FOR DELIVERY

July 27, 1984

# ARCADIAN

Vol 6 No 9

## CONNECT FOUR

BY ROBERT LEAKE

The object of this game is to get 4 of your playing pieces in a row without any of your opponent's pieces in between, vertically, horizontally or diagonally, before the computer or your human opponent does. Pieces drop vertically in the selected column to the lowest unoccupied position. To select a column, move the Joystick left or right and pull trigger when indicator is over desired column. Joystick 1 always goes first.

### IMPORTANT !!!

The Connect Four Data String must be input BEFORE you input the main body of the program. Follow the following instructions very carefully before you do anything else or this great program will not run.

### DATA DIRECTIONS:

Without a line number type the following commands (all spaces are for clarity only and need not be typed):  
CLEAR: NT=1; X(20000) = -24061; FOR A = -24576 TO -24068 STEP 2: PRINT #6, "X(", A, ")="; INPUT " " X(A); NEXT A

After you press GO the screen will clear and you'll see the number 'X(-24576)' printed on the screen. Now look on CONNECT FOUR DATA STRING chart and find that number (top of left column) and type the number to the right of the equal sign (in this case the number 1). Press GO and the next number will come up on the screen. IMPORTANT!!! Each time you type in a number proofread it to make sure you typed it correctly before you press GO. Be specially careful of the negative numbers on the lower portion of the 4th column and upper part of the 5th column. Those minus signs must be included in the negative numbers. If you make a mistake start from the beginning.

When you have input the last number you must do one more thing before you type the main part of the program. Type this command, again, without a line number:  
X(A) = 13; X(A+1) = -256; X(A+2) = 255; X(A+3) = 8192; X(A+4) = 0

When you press GO your job of inputting data is done! If you were to give the LIST command you would see a listing of lines 1 through 7 that looks like garbage. That's alright. Data always looks like garbage to humans! It's the computer we're trying to please now, right? Before you start typing in the rest of the program we recommend that you take a fresh cassette tape and save this program with the 'PRINT' command. Then, later, if you have a power failure, you won't lose all your hard work typing in the data. Now don't reset your computer. Lines 1 through 7 are already in there in the form of data. Continue from there by typing in lines 8 through 49 from the program listing.

```

6( ) ARRAYS:-      8(79)=8          8(82)=150
                  8(80)=1          8(83)=8000
8(77)=1200
                  8(81)=12         8(84)=0
8(78)=100

```

After you're done with that, type in the array exactly as you see it at the end of the listing: EXAMPLE, TYPE: 8(77)=1200 GO and so on until you have typed in all eight of the array entries listed. You are completely finished! Save the program on tape with the 'PRINT' command. If you've done it right, you are going to enjoy a really great game of Connect Four.

LOWERCASE = 1-BYTE KEYPAD WORDS. UNDERSCORES = SPACES. 1627 CHARACTERS

```

8 goto 14
9 box 0,43;87,1,2
10 box -49+12xC,43;9,1;return
11 M=X(-24225+14E+2xC);return
12 U=0;7;F=M;Iif F=0F=7
13 box -49+12xF,-8+(0-1)+7x9,11,8;3;return
14 clear input " _1_OR_2_PLAYERS?"P
15 BC=10;FC=183;for A=1to 76;B(A)=0;next A;f
16 lear ;box -1,14;87,56,1;for 0=1to 42;gosub 12
17 ;next 0;C=1;gosub 10;T=-1;N=69;CY=-32
18 J=(T/3)+2
19 D=C+X(J);if C#0if Dx(8-D)C=D;gosub 9
20 if (TR(J)+1)+(0C)=6;goto 17
21 gosub 37;T=-T;if P#1goto 16
22 L=-9999;for C=1to 7;gosub 9;if 0(C)=6;goto
23 36
24 E=0(C);gosub 11;W=0;for A=M+1to A+X(M)+25
25 6;B=X(A)+256-24;S=0(B)
26 W=W+B*(8048);next A;if W=0(B)K=C;C=7;got
27 o 36
28 if 0(C)=5;goto 35
29 if W#0(77);goto 35
30 S=E+1;gosub 11;B=0;H=1;for A=M+1to A+X(M)
31 +256;B=X(A)+256-24;S=0(B)
32 if S=-36=1
33 if S=-2W-W-2x0(78)+3
34 if S=2W-W=0(B)+3
35 if S=3H=0;W=-3333
36 next A;if 6,W=-6666;goto 35
37 if H+(0(C)=4);goto 35
38 E=E+1;gosub 11;I=0;for A=M+1to A+X(M)+256
39 ;B=X(A)+256-24;S=0(B)
40 if S=31=1
41 next A;if I,K;C=7;goto 36
42 if W,L=L-W;K=C
43 next C;C=K;gosub 37;T=-1;goto 17
44 E=0(C);gosub 11;0(C)=0(C)+1;X=-49+12xC;Y=
45 -17+9x0(C);gosub 9;box X,Y,9,6,1;box X,Y,5,2,
46 (7+T)+2;H=84
47 for A=M+1to A+X(M)+256;B=X(A)+256-24;S=0(
48 B);if S=408;goto 46
49 if SxT;C08(B)=4;N=N-1;goto 46
50 S=S+T;0(B)=S;if S#4x;goto 46
51 R=1;Z=X(-24144+8)+256-31;if B>31R=6
52 if B>43R=7
53 if B>64R=8
54 N=0;for 0=2to 24;3xRstep R;gosub 12;gosub
55 13;N=N-1;H=0;7+H;next 0;if TR(J)run
56 goto 44
57 next A;if N;return
58 print " _GAME_IS_A_DRAW
59 if TR(J)run
60 goto 48

```

## CONNECT-FOUR DATA STRING

|               |               |               |                |               |
|---------------|---------------|---------------|----------------|---------------|
| -24576= 1     | -24474= 21311 | -24372= 19274 | -24270= 611    | -24168= -608  |
| -24574= 17198 | -24472= 852   | -24370= 23116 | -24268= 15668  | -24166= 672   |
| -24572= 20047 | -24470= 16679 | -24368= 3419  | -24266= 3398   | -24164= 2465  |
| -24570= 17742 | -24468= 22358 | -24366= 4     | -24264= 5      | -24162= 4769  |
| -24568= 21571 | -24466= 10244 | -24364= 3118  | -24262= 814    | -24160= 7585  |
| -24566= 17952 | -24464= 17732 | -24362= 11564 | -24260= 13620  | -24158= 9889  |
| -24564= 21839 | -24462= 22854 | -24360= 12078 | -24258= 18752  | -24156= 11681 |
| -24562= 3410  | -24460= 781   | -24358= 16190 | -24256= 13316  | -24154= 12961 |
| -24560= 2     | -24458= 11776 | -24356= 19776 | -24254= 13877  | -24152= 15009 |
| -24558= 558   | -24456= 10247 | -24354= 20302 | -24252= 19522  | -24150= 16289 |
| -24556= 17440 | -24454= 14377 | -24352= 23900 | -24250= 13318  | -24148= 17825 |
| -24554= 860   | -24452= 18503 | -24350= 2654  | -24248= 13877  | -24146= 19873 |
| -24552= 8480  | -24450= 23113 | -24348= 11821 | -24246= 17207  | -24144= 21409 |
| -24550= 24391 | -24448= 2651  | -24346= 16687 | -24244= 22863  | -24142= 22689 |
| -24548= 8196  | -24446= 10536 | -24344= 20546 | -24242= 13572  | -24140= 3489  |
| -24546= 8737  | -24444= 14634 | -24342= 21073 | -24240= 14134  | -24138= 7     |
| -24544= 25162 | -24442= 19002 | -24340= 24671 | -24238= 23378  | -24136= 8238  |
| -24542= 8198  | -24440= 19531 | -24338= 1889  | -24236= 13827  | -24134= 8737  |
| -24540= 8737  | -24438= 23900 | -24336= 12078 | -24234= 21815  | -24132= 10019 |
| -24538= 14371 | -24436= 3166  | -24334= 21315 | -24232= 606    | -24130= 10536 |
| -24536= 25677 | -24434= 10536 | -24332= 21844 | -24230= 22583  | -24128= 11818 |
| -24534= 8452  | -24432= 11050 | -24330= 25442 | -24228= 3425   | -24126= 12335 |
| -24532= 8994  | -24430= 15419 | -24328= 12036 | -24226= 6      | -24124= 13617 |
| -24530= 20537 | -24428= 19773 | -24326= 22358 | -24224= 4654   | -24122= 14134 |
| -24528= 8707  | -24426= 20302 | -24324= 25688 | -24222= 5792   | -24120= 15416 |
| -24526= 15139 | -24424= 24671 | -24322= 12291 | -24220= 7072   | -24118= 15933 |
| -24524= 595   | -24422= 2657  | -24320= 17722 | -24218= 8608   | -24116= 17215 |
| -24522= 15907 | -24420= 10793 | -24318= 1350  | -24216= 10656  | -24114= 17732 |
| -24520= 854   | -24418= 15915 | -24316= 12592 | -24214= 12192  | -24112= 9030  |
| -24518= 17444 | -24416= 16447 | -24314= 15676 | -24212= 13472  | -24110= 10788 |
| -24516= 23109 | -24414= 20816 | -24312= 18760 | -24210= 14496  | -24108= 11045 |
| -24514= 9221  | -24412= 25170 | -24310= 12295 | -24208= 15776  | -24106= 9777  |
| -24512= 18213 | -24410= 1891  | -24308= 12849 | -24206= 17568  | -24104= 12844 |
| -24510= 23624 | -24408= 11050 | -24306= 16447 | -24204= 19872  | -24102= 13101 |
| -24508= 1885  | -24406= 16961 | -24304= 19531 | -24202= 22688  | -24100= 8244  |
| -24506= 9508  | -24404= 21587 | -24302= 2393  | -24200= 24992  | -24098= 11815 |
| -24504= 14374 | -24402= 25685 | -24300= 12592 | -24198= 26784  | -24096= 10273 |
| -24502= 19274 | -24400= 11012 | -24298= 13106 | -24196= 28064  | -24094= 8751  |
| -24500= 24671 | -24398= 22083 | -24296= 16961 | -24194= 30624  | -24092= 12329 |
| -24498= 9225  | -24396= 22615 | -24294= 20302 | -24192= -32608 | -24090= 10787 |
| -24496= 9765  | -24394= 11268 | -24292= 23386 | -24190= -29536 | -24088= 9265  |
| -24494= 14631 | -24392= 17464 | -24290= 12551 | -24188= -25952 | -24086= 12843 |
| -24492= 19770 | -24390= 17989 | -24288= 13106 | -24186= -22880 | -24084= 11301 |
| -24490= 25166 | -24388= 11271 | -24286= 20803 | -24184= -20576 | -24082= 9779  |
| -24488= 1891  | -24386= 14637 | -24284= 23890 | -24182= -19040 | -24080= 13357 |
| -24486= 9765  | -24384= 18234 | -24282= 1374  | -24180= -17504 | -24078= 10030 |
| -24484= 15143 | -24382= 18760 | -24280= 13106 | -24178= -15200 | -24076= 8239  |
| -24482= 20540 | -24380= 2649  | -24278= 21844 | -24176= -11104 | -24074= 12328 |
| -24480= 25681 | -24378= 11564 | -24276= 24928 | -24174= -7520  | -24072= 10529 |
| -24478= 9733  | -24376= 15150 | -24274= 13059 | -24172= -4448  | -24070= 8753  |
| -24476= 15911 | -24374= 15676 | -24272= 22615 | -24170= -2144  | -24068= 9002  |



July 27, 1984

KEN'S  
KORNER

## ARCADIAN

Vol 6 No 9

THIS SERIES OF ARTICLES IS TO ADD SOME KNOWLEDGE TO READERS THAT MAY BE IN THE DARK ABOUT SOME OF THE BASIC NO-NO'S OF PROGRAMMING!

ONE THING I HAVE NOTICED LATELY IS THAT

A LOT OF PEOPLE ARE USING SEMICOLONS (;) IN THE MIDDLE OF THEIR 'IF' STATEMENTS, LIKE THIS...

```
100 IF A=B;GOTO 100
```

THIS IS NOT ONLY POOR PROGRAMMING, BUT IT MIGHT NOT WORK SOMETIMES, ALTHOUGH I HAVE YET TO FIND A CIRCUMSTANCE TO PROVE ME RIGHT OR WRONG. ACTUALLY, THE PURPOSE OF A SEMICOLON IS TO TELL THE BASIC CARTRIDGE THAT IT HAS REACHED THE END OF A COMMAND OR A STATEMENT. THIS IS GENERALLY USED WHEN THERE ARE TWO OR MORE TOTALLY SEPERATE COMMANDS IN THE SAME LINE, LIKE THIS...

```
100 A=ABS(Q); IF A<55GOTO 200
```

NOTICE THAT I DID NOT USE A SEMICOLON IN MY 'IF' STATEMENT. IF I HAD, I WOULD HAVE JUST BEEN USING UP ONE BYTE OF PRECIOUS MENDRY SPACE FOR NOTHING!

ANOTHER QUESTION HAS BEEN ASKED OF ME. THIS ONE IS 'WHAT IS THE DIFFERENCE BETWEEN THE CHRDIS ROUTINE AND THE STRDIS ROUTINE, WHICH HAVE BOTH BEEN USED TO PUT MACHINE LANGUAGE GRAPHICS INTO SOME ASTROBASIC PROGRAMS?'

THE MAIN DIFFERENCE IS THAT THE CHRDIS (CHARACTER DISPLAY) ROUTINE IS GENERALLY USED TO DISPLAY ONLY ONE CHARACTER AT A TIME WHETHER IT BE AN 'ASCII' CHARACTER, OR A USER DEFINED CHARACTER. WHEREAS THE STRDIS (STRING DISPLAY) ROUTINE IS GENERALLY USED TO DISPLAY A STRING OF CHARACTERS, ONE RIGHT AFTER THE OTHER UNTIL A 00 (NOP) IS REACHED!

BOTH OF THESE ROUTINES ARE A PART OF THE ON-BOARD ROM AND CAN ONLY BE USED IF THE ASSOCIATED ROUTINE USED TO 'CALL UP' THESE ARE WRITTEN IN MACHINE LANGUAGE.

ONE OTHER THING YOU SHOULD TRY TO DO WITH YOUR PROGRAMS, UNLESS YOU ARE USING A MACHINE LANGUAGE PART IN YOUR PROGRAM, IS TO PUT AS MANY COMMANDS ON THE SAME LINE AS IS POSSIBLE. THIS NOT ONLY SAVES MEMORY SPACE (A SEMICOLON TAKES UP ONE BYTE AND A 'GO' TAKES UP ONE BUT A LINE NUMBER TAKES UP TWO PRECIOUS BYTES), IT ALSO ADDS SPEED! EACH TIME YOU USE A SEMICOLON INSTEAD OF A NEW LINE YOU SAVE TWO BYTES! BE CAREFUL, THOUGH, AS THERE ARE A COUPLE OF LINES THAT YOU CAN'T DO LIKE THIS!

1) AFTER USING A 'GOTO' IN A LINE WILL MAKE THE REST OF THE LINE 'NULL AND VOID', OR PUT ANOTHER WAY, IT WILL NEVER GET TO WHAT IS FOLLOWING THAT STATEMENT!

2) WHEN YOU USE AN 'IF' STATEMENT AND THE ADDED STATEMENTS AFTER IT DO NOT PERTAIN TO THE 'IF' STATEMENT! THESE WILL ONLY BE DONE WHEN THE 'IF' IS TRUE. WHEN THE IF IS FALSE, THE BASIC WILL GO ON TO THE NEXT LINE IN THE

PROGRAM AND FORGET ABOUT THE REST OF THE INFORMATION IN THE LINE!

ONE LAST LITTLE TID-BIT.

DON'T EVER SAY .... GOSUB 55;RETURN  
DOING THIS TAKES UP TWO EXTRA BYTES AS COMPARED TO .... GOTO 55  
THIS WILL DO THE SAME JOB AND ACTUALLY DO IT FASTER!

LET'S SEE WHAT IS GOING ON HERE. EVERY TIME YOU SAY GOSUB THE PLACE THAT YOU ARE CURRENTLY MUST BE SAVED BY THE COMPUTER SO THAT IT KNOWS WHERE TO GO TO WHEN IT HITS THE 'RETURN' LOCATED AT THE END OF THE SUBROUTINE. LET'S LOOK AT THIS SAMPLE..

```
100 A=ABS(Q);RETURN
110 B=ABS(P);GOSUB 100;RETURN
120 GOSUB 110;RETURN
300 C=D;GOSUB 120
```

LET'S START AT LINE 300. THIS IS THE ORDER OF EVENTS. FIRST C IS SET TO THE NUMBER IN D. THEN THE BASIC SEES THE GOSUB COMMAND, LOOKS AT WHERE IT HAS TO GO, (IN THIS CASE TO LINE 120) AND THEN IT 'PUSHES', OR SAVES IT'S PLACE AFTER THAT COMMAND SO THAT IT CAN EXECUTE THE NEXT STATEMENT WHEN IT HITS THE RETURN THAT WILL SEND IT BACK TO THIS SPOT. SO ACTUALLY, EVERY TIME THAT YOU USE A GOSUB, THE PLACE IS SAVED, IT GETS REMOVED WHEN THE RETURN FOR THAT POINT IS MET. NOW IT MUST START FROM THE VERY BEGINNING OF THE PROGRAM AND 'LOOK' FOR LINE #120 WHEN IT FINDS IT, IT THEN SEES THE GOSUB 110 AND THEN IT SAVES THAT POINT AGAIN! IN LINE 110 THERE IS A GOSUB 100, THIS ALSO SAVES THE PLACE. FINALLY WHEN IT GETS TO THE END OF LINE 100 IT REACHES THE FIRST RETURN. NOW IT HAS TO LOOK AT THE STACK OF PLACES THAT IT HAS SAVED AND THEN GO TO THE LAST PLACE THAT WAS PUT INTO THIS STACK, WHICH WAS IN LINE 110, WHERE IT THEN ENCOUNTERS ANOTHER RETURN. IT NOW LOOKS AT THE ADDRESS THAT IS NOW ON THE TOP OF THE STACK (IT THREW OUT THE OLD PLACE!). THIS THEN SENDS THE PROGRAM TO LINE 120 FOR A FINAL RETURN AND THEN THE LAST PLACE IS THEN TAKEN FROM THE STACK! WHEN! THAT IS AN AWFUL LOT OF WORK! LET'S SEE HOW WE CAN REDUCE SOME OF THIS WORK.

```
100 A=ABS(Q);RETURN
110 B=ABS(P);GOTO 100
300 C=D;GOSUB 110
```

YOU'LL NOTICE THAT THERE IS NO LONGER A LINE 120. THIS LINE WAS REDUNDANT. NOW THERE IS ONLY ONE TIME THAT THE BASIC HAS TO SAVE IT'S PLACE. THE GOTO HOWEVER HAS TO DO THE SAME THING THAT THE GOSUB HAS TO DO TO FIND IT'S PROPER LINE. THAT IS, START FROM THE VERY BEGINNING OF THE PROGRAM AND SEARCH UNTIL IT FINDS THE LINE! THIS CAN STILL BE REWRITTEN TO BE FASTER IF YOUR PROGRAM WILL PERMIT THIS CONFIGURATION.

```
100 B=ABS(P)
110 A=ABS(Q);RETURN
300 C=D;GOSUB 100
```

GETTING ORGANIZED

BY ARTHUR HALE

IN TODAY'S WORLD OF THE EVER FAST GROWING HIGH TECHNOLOGY, THE USE OF PAPER IN ORDER TO KEEP PROPER RECORDS IS BECOMING A THING OF THE PAST. IN THIS SHORT ARTICLE I HOPE TO POSSIBLY GIVE SOMEONE OUT THERE A GOOD WAY TO STILL USE PAPER TO THEIR ADVANTAGE.

DO YOU HAVE TAPES (FOR THE ARCADE) SCATTERED ALL OVER THE HOUSE FOR THE LACK OF PROPER SPACE TO STORE THEM AROUND THE COMPUTER? MAYBE YOU'RE ONE OF THE GUYS (OR GALS) THAT USE 90-MIN. TAPES TO STORE ABOUT 100 PROGRAMS ON ONE SIDE. THERE'S NOTHING WRONG WITH THAT IF YOU CAN FIND THE PROGRAM WITH EASE. A FILE SEARCH IS FINE TO USE FOR A FEW PROGRAMS, BUT IF YOU HAVE 20 OR MORE ON THE SAME TAPE, YOU MAY ALSO HAVE A LONG WAIT. THIS IS WHAT WE USE PAPER FOR!

LET ME START BY SAYING IF YOUR TAPE RECORDER DOES NOT HAVE A DIGITAL TAPE COUNTER ON IT, YOU SHOULD PURCHASE ONE AS YOU SOON SHALL SEE. NOW LET'S GET TO IT.

MY FIRST SUGGESTION TO YOU WOULD BE TO USE THE LONGER TAPES, MAYBE NOT THE 90-MIN. JOBS, BUT ONE LONG ENOUGH TO STORE A GOOD NUMBER OF PROGRAMS ON ONE SIDE. SECONDLY, PLACE EACH PROGRAM THE SAME DISTANCE APART (I START MY FIRST PROGRAM AT 10 ON THE TAPE COUNTER AND PLACE MY SECOND AT 20, THIRD AT 30, ECT...) FOR EASE IN LOCATING EACH PROGRAM. NEXT, HAVE ONE TAPE FOR EACH SPECIFIC CATEGORY (EX. ARCADE GAMES, EDUCATIONAL, ENTERTAINMENT, UTILITIES, ECT...). YOU WILL HAVE TO START A ENTERTAINMENT II, ECT., OF COURSE WHEN THE NEED ARRIVES. WITH THIS METHOD ONE CAN STORE OVER 30 PROGRAMS ON ONE SIDE OF A 30-MIN. TAPE (15 MIN. ON EACH SIDE). BUT WE STILL DON'T HAVE AN EASY WAY TO FIND EACH PROGRAM. COULD PAPER BE THE ANSWER TO THIS PROBLEM? IF YOUR ANSWER IS YES TO THE ABOVE QUESTION, THEN YOU'RE ABSOLUTELY RIGHT! YOU SIMPLY HAVE TO KEEP A NOTE BOOK OF WHERE YOU CAN FIND YOUR PROGRAM ON TAPE AND WHICH TAPE IT'S ON AND PRESTO YOU HAVE IT.

SUPPOSE I WANTED TO PLAY GEORGE MOSES'S "ASTRO-ZAP", ALL I WOULD HAVE TO DO IS LOOK ON MY LIST OF THE ARCADE GAMES TO FIND THE LOCATION OF THE FIRST OF THE PROGRAM. THERE WOULD ALSO BE A SHORT SET OF INSTRUCTIONS FOR THE GAME. I PLACE MY TAPE (ARCADE GAMES) IN THE RECORDER, MAKING SURE IT IS REWOUND TO THE START OF THE TAPE, I THEN RESET THE COUNTER. IF THE GAME IS THE 8TH GAME ON THE TAPE, I FAST FORWARD IT UNTIL THE COUNTER READS 79, OR SOMETHING RIGHT BEFORE 80. I THEN DO MY INPUT THING (:INPUT; RUN GO) AND I'M ON MY WAY.

EXTENDED BASIC PEOPLE CAN USE THIS WITH EVERYTHING. I USE IT FOR WORD PROCESSING, CHECK BOOK REGISTER, HOME FILING OF ALL KINDS, AS WELL AS THE THINGS LISTED ABOVE, ALTHOUGH A LONGER PROGRAM MAY CHANGE THE SPACING SOMEWHAT. I USE MY PROCESSOR TO PRINT OUT MY LIST AND NOTES. THIS WAY I ONLY HAVE TO UPDATE IT EVER SO OFTEN, NOT HAVING TO REDO THE WHOLE THING.

I HOPE SOMEONE CAN USE THIS INFORMATION TO THEIR ADVANTAGE. NOW GO GET ORGANIZED!! LATER.

ARTHUR HALE  
2719 WASHINGTON AVE.  
SAINT ALBANS W. VA. 25177  
(304) 722-6440

CONT. FM. P. 82

IN THIS WAY, THE BASIC ONLY HAS TO SEEK OUT ONE PLACE! IF YOU ONLY WANT THE EQUATION IN LINE 110 THEN JUST TYPE IN GOSUB 110 INTO YOUR PROGRAM!

I HOPE THAT THESE LITTLE TIPS HAVE DONE SOME GOOD IN EXPLAINING SOME OF THE FINER POINTS USED IN GOOD PROGRAMMING.

UNTIL NEXT TIME-----HAPPY PROGRAMMING!

KEN LILL  
6608 S CAMPBELL  
CHICAGO, ILLINOIS 60629

## STRATEGIC AIR COMMAND

BY BOB WEBER &amp; GEORGE MOSES

LOWERCASE = 1-BYTE KEYPAD WORDS. UNDERSCORES  
= SPACES. 1612 CHARACTERS

```

1  _NT=-1;F=9000/F=1000;M=2000;I=7000;J=5
2  0001:I=3000;I=8000;F=4000
3  _10_cloar;BC=rdn (256);F=BC+4;B=32767;
4  W=6;igogus 10000;clear igosuf;F=30;A=0;igus
5  H;V=A
6  _15_CY=4000;?POPULATION=_"#,A",,000
7  _20_R0;W=M-20;if A<9CY=-25;print "YOU_LOSE
8  !";goto I
9  _30_print "YOU_HAVE_"#,I,0, "MISSILES";print
10 _E=MY_HAS_"#,I,Sx5," MISSILES";B=A-for Z=1
11 0 H;next
12 _35_I=I-S=0 if U-B<100CY=-25;print "YOU_WIN";g
13 0 to I
14 _40 if S=0CY=-25;print "YOU_LOSE!";goto I
15 _50_box 0,10,160,72;2;print "***** ENEMY AT
16 TACK *****";(1;16)=4;(1;17)=243;(1;18)=244;(1
17 9)=245;(1;21)=15
18 _60_8,(2;22)=255;(2;23)=10;for Z=10 H;next Z;bo
19 x 0,10,160,72;2;igogus L;Y=W;for Z=10 to 5;box
20 (Z),Y,1,3;3;next Z
21 _65_Y,1=-1;(6;16)=Y+74;for Z=10 to 5;if (Z)=0go
22 to 100
23 _70 if FX((Z),Y)-1;NT=0;igogus 0
24 _80 if FX((Z),Y)=0(Z)=0;goto 100
25 _90_box (Z),Y,-1,1,1;box (Z),Y+2,1,1,2
26 _100_mst Z;if Y<-38;box P;goto 140
27 _110 if TR(1;I)=R=0;I=0;00-R=5;R=igogus P;M=
28 -30;for M=6 to 10;box (M),N,1,3;3;next M
29 _120 if R=igogus J
30 _130_goto 65

```

```

140_A=0;gusb H;if B-A=0C=Y=0;print "NO_LOSSE
S;fgoto 160
150_C=Y;fgoto 11;B=A+*,000_KILLED
160_S=1;fgoto 15
1000_box 0,-42,160,3,1;for G=-80to 79step 3;box
G,-38,rnd 5,3;rnd (6),1;for N=1to 2
1010_box G,-32,-rnd (9),1;rnd (2),2;next N;next
t;G;return
2000_gosub E;box 0,5,160,75,2;fY=40;print "CO
UNTING POPULATION
2100_for Y=-37to -34;for X=-80to 79;if PX(X,Y)
A=A+1
2200_HU=A;next X;next Y;if A>B_A=B
2030_NT=Y;return
3000_for Z=1to 5
310_A=rnd (150)-75;f C=to 5;f @ (C)=A;f
A=0;goto 3010
3020_next C;f @ (Z)=A;next Z;return
4000_for Z=6to 10
410_A=rnd (150)-75;f C=to 6;to 10;f @ (C)=A;go
to 4010
4020_next C;f @ (Z)=A;next Z;return
5000_N=H+1;for M=6to 10;f PX @ (M),N)=0;goto 5
030
5005_fif JX(1)=box (M),N)-1,1,3;f @ (M)=@ (M)+JX
(1);box @ (M),N)-1,1,3,3
5100_box @ (M),N)+1,1,1,1;box @ (M),N)-2,1,1,2
5020_fif N=@ (21)=255;f @ (16)=1;box @ (M),N),9,9,
1;f @ (M),N),9,9,2;for D=1to 500;next D;f @ (16)
=174
5030_fif N=Y+1;A=0
5040_next M;f @ (21)=15;return
7000_C=Y=0;print "ORIGINAL_POP._=",*1,U,*",00
0
7010_print "TOTAL_LOSS =___",*1,U,*",000";p
rint "PRESS_ANY_KEY_to_PLAY AGAIN";f K=F
up

```

# ASTROBASIC SOFTWARE ON CASSETTE TAPES

1. Morse Code Trainer with MorseCode II - a true trainer with programmable levels, speed, screen mode and learn/test mode. Includes lesson plan.

2. Astro-Analyst with Memomax - a symbol interpretation program. Gives an individual personality profile. Memomax - a memory game.

3. Rhythm Box in 4/4 and 3/4-  
3 part harmony. Keeps the  
beat. 7 styles, 3 speeds.  
Remote control of start/  
stop-fade and vibrato  
on/off. Includes chord  
charts and foot switch/  
wave (tone) shaper  
schematics.



PROJECT - CYCLOPS  
RADAR BASE

You steer the radar-launched missile into the eye of the cyclops. If you miss him, he'll charge and fire at your base. (A P.P.I. - Plan Position Indication radar display simulation.)

Order by mail: (check or M.O.)

Any listed program \$8<sup>00</sup>  
Buy two and take a third  
tape absolutely FREE

Enclosed is \$\_\_\_\_\_

Please send the following:

- 1- Morse Code Trainer & II
- 2- Astro-Analyst & Memomax
- 3- Rhythm Box
- 4- Project Cyclops Radar Base

NAME \_\_\_\_\_

ADDRESS

CITY - STATE

218

Address all orders to:

FRED RODNEY  
1190 Albany Avenue  
Brooklyn, N.Y. 11203

LOWERCASE = 1-BYTE KEYPAD WORDS, UNDERScores  
= SPACES. 757 CHARACTERS

```
10 clear :SM=1:CY=-24:CX=-63:print ">>>BY_JD
E PEOPLES<<<"
20 A=-72:CY=30:CX=A:print "B":CY=22:CX=A:print
"0":CY=14:CX=A:print "N":CY=6:CX=A:print "
A"
30 CY=-2:CX=A:print "N":CY=-10:CX=A:print "Z
":CY=-13:CX=-65:print "A":CY=20:CX=5:print "G
AS":CX=2:print "WELL"
40 line -62,-7,4:line -62,30,1:line -42,30,1
:line -40,29,1:line -39,28,1:line -39,26,1:li
ne -36,27,1:line -33,26,1
50 line -29,28,1:line -24,28,1:line -19,32,1
:line -10,35,1:line -10,12,1:line -11,4,1:lin
e -13,-2,1:line -17,-5,1:line -19,-4,1:line -
23,-9,1
```

LOWERCASE = 1-BYTE KEYPAD WORDS, UNDERScores  
= SPACES. 1604 CHARACTERS

```
1 .103305050:ix10000
2 goto 40
3 CY=-24:CX=-60:return
4 CX=-60:CY=40:return
5 if TR(P)gosub 8:return
6 goto 5
7 gosub 4:print #0,"CAPITAL $",#(P),",",#(P+
4)+100,RH+10,RH," " ;return
8 box 0,-31,160,26,2:return
9 W=#(P):Q=#(P+4):W=W+C+1000:Q=Q+RM;if Q<0Q=
1000+Q;W=W-1
10 if Q>999W=W-Q+1000:Q=Q+RM
11 #(P)=W:#(P+4)=Q:gosub 7:return
12 P=P+1;if P>N_P=1
13 goto 50
14 NT=12;if A=-24573to -24556:MU=X(A):next
A:NT=0:return
15 for L=Lo 35step 2:box K,L,2,2,3:next L:if
or A=to 9:box K+A,L,1,1,3:box K-A,L,1,1,3:L=
A+2:next A:return
16 box K,-20,2,19,1:gosub 8:return
17 S=rd (53)-63:T=rd (54)-19:return
18 box X,Y,2,2,3:return
40 gosub 4:NT=K(1)+753:print "PLAYERS?_",#0
,N:if TR(1)=0goto 40
42 gosub 8
50 gosub 4:print "COMPANY_",P,"_" ;gosub 5
52 B=1:gosub 7:C=P*10;for A=C+to C+@C(C):gos
ub 3:print "WELL NO",B:if @A=0goto 58
54 if rd (10)=5#@A=0:print " _RAN_DRY":got
o 58
56 CX=0:print #0,@A)+100," _CUFT/DAY":CX=0:p
rint #0,"$ ",RM," _CUFT",;for D=to 6:C=#A)+1
00:RM:gosub 9:next D
```

```
60 line -23,-11,1:line -25,-12,1:line -25,-1
0,1:line -28,-13,1:line -27,-15,1:line -29,-1
6,1:line -32,-18,1:line -37,-15,1:line -36,-1
4,1
70 line -39,-14,1:line -40,-15,1:line -43,-1
5,1:line -47,-15,1:line -57,-13,1:line -56,-1
0,1:line -59,-9,1:line -62,-7,1
80 line 35,-10,4:line 47,31,1:line 51,31,1:l
ine 66,-10,1:line 38,-1,1:line 58,11,1:line 4
5,20,1:line 55,20,1:line 41,11,1:line 62,-1,1
:line 35,-10,1
90 box 50,-14,35,8,1:box 49,32,5,2,1:box 50,
21,11,2,1:box 50,13,17,2,1:box 50,0,25,2,1:CY
=-40
```

```
58 gosub 5:B=B+1:next A:Y=0;if @P<10
CY=-30:print " _BANKRUPT":goto U
60 if @P>999gosub 8:gosub 13:NT=0:print "GA
S WELL BONANZA":gosub 14:goto 60
62 gosub 18:Y=X+JX(P)*2,Y=Y+JY(P)*2;if TR(P)
goto 66
64 gosub 18:goto 62
66 E=rd (99):X=200:F=rd (29)+8:G=rd (89):H=
rd (12):X=800:I=rd (30):Y=800;if rd (3)=2gosub
17
68 gosub 3:print "GEOLOGICAL STUDY_",#0,E
70 if TR(P)=C=E:gosub 9:goto 76
72 if JX(P)goto 80
74 goto 70
76 gosub 3:print "ODDS OF GAS STRIKE_",#0,G,
"X_" ;if ABS(X-S)<10if ABS(Y-T)<100:G+10
78 print " _%/FT. DOWN $",#0,F:print " _DEPT
H OF RES.",#0,H,"FT _",;gosub 5
80 gosub 3:print "PROPERTY RIGHTS_",#0,I
82 if TR(P)=C=I:gosub 9:goto 88
84 if JX(P)goto U
86 goto 82
88 J=0:K=50:L=-9:gosub 8:box K,-31,35,26,1
90 M=(100-G)+10:I=rd (M+M):NT=5:MU=X(B151);
NT=0:box K,L,2,2,2:0=L:L=2,2;if JX(P)gosub 16
:goto U
92 J=X+J300:C=X+300:gosub 9:gosub 3:print "D
RILLING AT":print " _",#0,J,"FT",;if J>H+200
Oprint " _DRYHOLE",;gosub 16:goto U
94 if J>H+2000:if M=gosub 15:L=D:gosub 14:go
sub 15:gosub 16:goto 98
96 goto 90
98 C=P*10:D=rd (275)*100:F=rd (50):for A=C
+to C+@C(C):if @A=0@A=D+@F:goto U
100 next A:@C(C)=@C(C)+@C(C)+@D+@F
102 box X,Y,2,2,2:for A=to P:box X,Y,3,1,1;
box X,Y,1,1,3,1:Y=X+2:next A:goto U
```

GASWELL BONANZA includes a separate program (at the top of the page) to give you a sort of title slide. This game was inspired by an ESOTERICA game, no longer available.

Joe Peoples  
310 Sailfish Lane  
New Philadelphia, OH 44663

# ASTROCADE

## Summer Sale

Now! Get your favorite Astrocade Cartridge for the lowest prices ever! Prices normally \$24.95 to 34.95 now \$4.95 each.  
Sale running to September 15, 1984.

Choose from the Following Titles:

2001 280Zzap/Dodgem  
2002 Seawolf/missile  
2003 Red Baron/Panzer Attack  
2004 Brickyard/Clovers  
2005 Star Battle  
2009 Astro Battle  
2010 Dogpatch  
2012 Space Fortress  
3001 Baseball  
3002 Football  
3005 Bally Pin  
4004 Biorhythm  
5002 BlackJack/Poker

We also are sorry to announce that the cartridges from Esoterica Ltd., Treasure Cove and BlastDrums are no longer available.

By the way, we still have in stock some of the newest games for the Astrocade, such as Cosmic Raiders, Solar Conqueror, Muncher, Ms. Candyman, Sea Devil, and Sneaky Snake. This group are not on sale.

Remember, Sale running to September 15 for all of the above cartridges--\$4.95 each also please include \$1.50 for shipping. Quantity is limited so buy now. Sale limited to existing stock. Once we are out--it is over

ABC Hobbycraft  
2155 E. Morgan  
Evansville IN 47711  
(812) 477-9661

LOWERCASE = 1-BYTE KEYPAD WORDS. UNDERScores  
= SPACES. 1662 CHARACTERS

```

1 NT=-0;clear ;CY=0;print "___ACME__BATTERY_
DRIVING_____TEST";input "-----#_OF_PLAY
ER'S? (1-4)";Y;if Y>4goto 1
2 clear ;T=0;for X=1to Y;S=500;D=0;FC=125;BC
=40
3 A=-50;B=40;D=0
4 E=2;F=2;G=2;H=2;I=2;J=2;K=2;L=2;M=2;N=2;O=
2;P=2;Q=2;R=2
10 box -1,0,151,88,1;box 0,0,148,86,2;box 0,
0,138,78,1;box -30,0,5,82,2;box 40,0,5,82,2
11 box 0,5,138,5,2;box 0,-8,138,5,2;box 0,-2
2,138,5,2
12 box -50,37,8,4,E;box 8,10,4,4,F;box 45,25
14,4,G;box 67,0,4,4,H;box 45,13,4,4,I;box 45,
-2,4,4,J;box 36,0,3,3,K
13 box 36,-4,3,3,L;box -48,-30,4,4,M;box 45,
-30,4,4,N;box -38,-37,4,4,O;box -52,-17,4,4,P
;box -34,-14,4,4,Q;box -60,-13,4,8,2_
24 box -64,-15,4,4,R
25 box -44,-30,5,20,2;box A,B,3,3,3
27 CY=18;CX=-22;print " _STOP!#",#2,D
28 if D=13;for A=1to 2000;next A;clear ;CY=0
;print "-----VERY_GOOD";for A=1to 2000;nex
t A;T=T+1;goto 200
35 CY=30;CX=-22;print " _DRIVER",#2,X
36 if D>0goto 50
49 for C=Sto -Ostep -1
50 box A,B,3,3,3
51 A=A+JX(X)x100+50
52 B=B+JY(X)x100+50
53 Z=0;NT=0;NT=-1;for V=17to 22;%(V)=200;nex
t V;%(16)=255
54 if PX(A,B)-0;A=-50;B=40
55 CY=-30;CX=-22;print " _TIME!",#2,C
56 box A,B,3,3,3
57 if A>8-3if A<8+3if B>9-3if B<9+3_B=5;F=1;
goto 150
58 if A>44-2if A<44+2if B>-2-2if B<-2+2_A=40
;J=1;goto 150
59 if A>67-2if A<67+2if B>0-2if B<0+2_A=70;H
=1;goto 150
60 if A>44-2if A<44+2if B>13-2if B<13+2_A=40
;I=1;goto 150
61 if A>44-2if A<44+2if B>25-2if B<25+2_A=40
;G=1;goto 150
62 if A>36-2if A<36+2if B>0-2if B<0+2_A=40;K
=1;goto 150
63 if A>36-2if A<36+2if B>-4-2if B<-4+2_A=40
;L=1;goto 150
64 if A>-45-2if A<-45+1if B>-30-2if B<-30+2_
A=-44;M=1;goto 150
65 if A>44-2if A<44+2if B>-30-2if B<-30+2_A=
40;N=1;goto 150
66 if A>-38-2if A<-38+2if B>-38-2if B<-38+2_
B=-41;O=1;goto 150
67 if A>-52-2if A<-52+2if B>-18-2if B<-18+2_
B=-21;P=1;goto 150
68 if A>-34-2if A<-34+2if B>-14-2if B<-14+2_
A=-30;Q=1;goto 150
69 if A>-64-2if A<-64+2if B>-15-2if B<-15+2_
A=-60;R=1;goto 150
70 if C=0;CY=-15;CX=-25;print " _GAME_OVER";n
ext X;NT=-0;goto 190
72 next C
150 D=D+1;goto 11
190 STOP
200 if T=1_S=400;FC=165;BC=160;goto 3
201 if T=2_S=300;FC=120;BC=140;goto 3
202 if T=3_S=275;FC=180;BC=120;goto 3
203 goto 3

```

Henry Sopko  
2705 King Street East #110  
Hamilton, ON Canada  
L8K 1Y4

ACME DRIVING TEST requires you to drive your car along the road, keeping away from the curb. You must enter each stop by lining up with it, then pushing the joystick in the right direction. The computer will put you back on the road, ready to go onward. Each new screen (change in color) cuts the time factor downward, making it more and more difficult to complete the test.

ADS

WANTED --Tapes (3) by Todd Johnson of Spokane. Contact George Krec, 1932 Woodward Ave., Cleveland, OH, 44118

VACATION COMING UP in September, and we will drop one issue as a result. We will make up for it in October, with a double-size job, at least. October will also be the last issue of the fiscal year - everyone's subscription started with the November 1983 issue, regardless of when they actually subscribed.

GAME PLAYER COLUMN is not included this time - Mike indicated to me that it would be late.

88

ARCADIAN

Robert Fabris, catching up  
3626 Morrie Drive  
San Jose, CA 95127

the SOURCE TCD 959

FIRST CLASS  
U. S. POSTAGE  
PAID  
Sunnyvale, CA  
Permit No. 931

## ASTRO ZAP 2000

BY GEORGE MOSES

ASTRO ZAP is similar to the commercial arcade game "SPACE ZAP" by Midway, only you don't need a quarter to play. It will keep score for up to four humans, using 1 hand control for each. When you RUN the program, input the number of players from the keypad. When the game starts you will use only the joystick to fire back at the invading missiles. No trigger is necessary. You will receive 250 points for each missile you eliminate. A Kamikaze will orbit your space fortress at random intervals. You must shoot it down before the second orbit or it will dive into you. Each human begins with three bases and will be awarded a bonus base every 10,000 points. As points accumulate the missiles will travel faster until you can no longer keep up with the onslaught. If the missile hits the base there will be a terrible explosion which goes on and on and on. If you get sick of watching yourself explode, pull the trigger to abort the fireworks. This will bring up the next player's turn. The only other use of the trigger is at the GAME OVER display if you wish to start a new game.

**IMPORTANT.** Never put any spaces in this program unless you see the "■" symbol. Any spaces you see are only in there for clarity. A word of caution about the letter "O" (as in OH). It is used as a variable in lines 21, 22, 101 and 510. Use care not to confuse it with the "0" (as in zero.) Also use the computer command word "INPUT" in line 500 instead of typing the word out. You should have 47 bytes of memory left. A minimum of 40 bytes are needed to handle the scorekeeping strings.

```

1 NT=0;GOTO X
2 FOR K=1 TO B;NEXT K;RETURN
3 TA=44;TB=53;TC=67;RETURN
4 VA=6;VB=6;VC=6;RETURN
5 CX=M;CY=N;RETURN
6 NV=T;MO=0;NM=1;RETURN
7 N=0;M=RND (30);RETURN
20 BOX 0,0,24,18;1;BOX 0,0,24,12;3;BOX
0,0,18,18;3;BOX 0,0,20,1;3;BOX 0,0,1,14,3
21 FC=149;BC=8;C=1;CY=32;CX=-71;PRINT
#1,@(Q),IF @ (F)=0PRINT #1,"00"
22 PRINT #1,@ (F);IF @ (F)=0GOSUB 4;GOSUB
3;MO=44;1;FOR A=1 TO
3;B=T;CY=0;CX=-26;PRINT
"BONUS BASE";MO=44;GOSUB 2;MO=89
24 IF B=T■B=S;BOX 0,0,60,8;GOSUB 2;
NEXT A;#1;@(H)=@(H)+1;
@(Q)=@(Q)+1;GOTO 511
25 IF L GOSUB 4;MO=T;GOSUB 3;GOSUB
U;L=L-1;#1;B=V;GOSUB 2;IF L GOTO 25
26 N=N+1;IF N=M GOTO 70
27 IF B=V GOSUB 2
30 GOSUB 3;GOSUB 4;C=ABS(C);E=RND
(4)+93;MO=T;IF E=94B=-40;GOTO 60
31 IF E=95B=64;C=-C
32 IF E=96B=40;C=-C;GOTO 60
33 IF E=97B=-64
50 CY=0;FOR A=B TO B+6STEP
C;MO=A;CX=A;TV=E;IF JX(F)IF
JY(F)=0XY=0;LINE ABS(A) XJ(F),0,3;IF
PX(A,0)=0GOTO R
51 NEXT A;GOTO S

```

George Moses  
 PO Box 686  
 Brighton MI 48116

```

60 FOR A=B TO B+5STEP
C;MO=A;CX=0;CY=A;TV=E;IF JY(F)IF
JX(F)=0XY=0;LINE 0,ABS(A) XJY(F),3;IF
PX(0,A)GOTO R
61 NEXT A;GOTO S
70 B=V;GOSUB 3;GOSUB 4;MO=20;
VR=4;VF=50;M=0;N=30;D=-10;E=0
75 IF M■D=D+ABS(M)+(-M)×2
76 IF N■E=E+ABS(N)+(-N)×2
95 GOSUB 5;PRINT " ";GOSUB 5;PRINT "×";GOSUB
5;PRINT "■";FOR A=1 TO 2;XY=0;LINE
0,30 XJY(F),3;XY=0;LINE 33 XJY(F),0,3;IF
PX(M,N)GOSUB 7;GOTO R
96 NEXT A;M=M+D;N=N+E;IF N=30E=E+3
98 IF M=0IF N=0GOTO S
99 GOTO 75
100 GOSUB 6;FOR A=2 TO 10STEP 2;BC=RND
(T);FC=BC-4;BOX CX=-6,CY,A,3;NEXT A
101 BOX 0,0,W,10,2;BOX 0,0,10,88,2;@(F)=@(F)+T;IF
@(F)=V@(F)=0;@(P)=@(P)+1;@(O)=@(O)+1
110 GOTO 20
200 GOSUB 6;FOR A=2 TO W;CX=RND
(A)-A+2;BC=RND (T);FC=BC-4;
CY=RND (A+2)-A+4;XY=0;LINE RND
(W)-81,RND (88)-45,3;TV=46;NV=RND (2)+1
201 IF TR(F)=ONEXT A
211 L=1;@(H)=@(H)-1
215 H=H+1;IF H>G+■H=G+1
216 CLEAR;FOR A=G+1 TO G+4;IF @ (A)=ONEXT
A;BC=0;FC=149;CY=-8;CX=-28;
PRINT "GAME OVER";GOTO V
220 #1;NEXT F;GOTO Y
300 FOR MO=T TO 5STEP-1;A=1;NEXT MO;IF
L=2FOR MO=5 TO T;A=1;NEXT MO
301 RETURN
500 FOR A=0 TO Z;@(A)=0;NEXT A;FOR A=1 TO
20;@(A)=2;NEXT A;CLEAR;CY=0;PRINT "INPUT
#1PLAYERS";IG=KP-48;IF (G<1)+(G>4)RUN
501 PRINT#2,G;FOR A=G+1 TO G+G;@(A)=3;NEXT
A;H=G+1;L=2
510 CLEAR;FOR F=1 TO
G;O=F+8;P=F+12;Q=F+Z;GOSUB 7
511 CY=0;PRINT
"■PLAYER";#2,F;#1;@(Q)-1;CY=-32;PRINT
"■BASES";PRINT #4,@ (H),
512 IF @ (H)=0GOTO 215
514 GOTO 20
1000 CY=40;CX=36;PRINT "SCORE";FOR A=1 TO
G;CX=24;PRINT #1,"#1,A,■",@(A+8);IF
@ (A)=0PRINT #1,"00"
1010 PRINT #1,@ (A);NEXT A
1020 IF TR(1)RUN
1030 GOTO 1020

```

Because all memory is used up the variables R through Z must be loaded as direct commands from the keypad to make this program work.

line number:

Type the following without a

R=100;S=200;T=250;U=300;V=1000;  
 W=160;X=500;Y=510;Z=16;RUN

WHEN YOU PRESS GO your program should run perfectly. To save the program on tape just use :PRINT GO with your recorder running on RECORD.



# ARCADIAN

LOWERCASE = 1-BYTE KEYPAD WORDS. UNDERScores  
= SPACES. 1789 CHARACTERS

```

1  ,10x165350020010x16535000006x56345604020060
667x1x27653210x1653500200102345600067x1_x1__
x176545600700x1
5  NT=0;@ (4)=0;@ (5)=0;BC=160;FC=4;goto 10
6  CX=-77;return
7  for Q=1to 150;next Q;return
8  box B,C,5,3,2;box 0,D,5,3,2;box -B,C,5,3,2
;box B,C,5,3,@ (0);box 0,D,5,3,@ (1);box -B,C,5
,3,@ (2);@ (P+3)=@ (P+3)+@ (C3)=1)
9  CY=-26;CX=44;print "VIS",#2,@ (4);CX=38;pri
nt "HOME",#2,@ (5);return
10 clear ;S=21;X=-3;for A=-35to -6;X=X+2;box
X,A,S,1,1;box -X,A,S,1,1;next A;box 58,-4,S,
2,1;box -58,-4,S,2,1;for A=-3to 26
-20 box X,A,S,1,1;box -X,A,S,1,1;X=X-2;next A
;A=-32;line 0,-34,0;line 58,C,2,1;line 0,25,2;
line -58,C,2,1;line 0,-34,2;box 0,A,1,1,3,1
30 box 0,-34,3,1,2;box 0,A,5,3,2;box 0,-35,1
,1,2;box 0,-37,15,3,1;box -B,C,7,5,2;box B,C,
7,5,2;box 0,D,7,5,2
40 T=7;for Z=-24to -4step T;box 0,Z,T,13,1;T
=T-2;next Z;box 0,0,9,5,1;box 0,0,7,7,1
50 CX=-S;print "SXDXTXHX";I=0
60 I=I+1;CY=-24;gosub 6;print "ING_",#1,I;fo
r P=1to 2;for Z=0to 3;@ (Z)=2;next Z;CY=-40;go
sub 6;if P=1;print "VIS";goto 70
65 print "HOME",
70 print "_UP_",gosub 8;for D=0to 2;S=0;CY=
-32;gosub 6;print "OUTS",#2,0
72 if I=7if P=2if D=0gosub 800
75 CY=32;gosub 6;print "STRIKE",#2,S,"-----
<",#2(20)=0
80 NT=-1;if TR(P)goto 400
82 if @ (18-P)=0goto 80
88 for CX=27to -21step -18;print "^\_",if TR
(P)=0next CX;goto 400
90 H=CX-18;H=(H=15)x4+(H=3)x3+(H=-9)x2+(H=-2
1);if H=0goto 500
95 gosub 700;if rnd (3)=1CY=32;gosub 6;print
"FLY BALL CAUGHT!";gosub 7;goto 500
97 if H=4@ (21)=15;@ (19)=20;@ (20)=150;for Q=1
to 999;next Q;@ (20)=0;@ (21)=0;@ (19)=0
100 for Z=1to H;for Y=3to 1step -1;@ (Y)=@ (Y-
1);next Y;@ (0)=2-(Z=1);gosub 8;NT=5;MU=64;NT=
0;next Z
120 if I>8if P=2if @ (4)<@ (5)goto 600
130 S=0;goto 75
400 print "___S=S+1;@ (22)=-1;@ (16)=60;@ (17)
=71;@ (18)=85;gosub 7
410 if S<@ (22)=0;goto 75

```

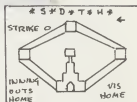
```

500 @ (17)=71;@ (18)=85;@ (22)=-1;for Z=60to 15
0;@ (16)=Z;next Z
510 @ (22)=0
520 next Q;if I=9if P=1if @ (4)<@ (5)goto 600
530 NT=15;gosub 7;@ (20)=129;for Z=-24573to -
24562;MU=@ (Z);next Z;gosub 7;NT=0
550 next P;if (I<9)+@ (4)=@ (5)goto 60
600 CY=0;CX=-24;print "GAME_OVER
610 STOP
700 XY=0;for Z=0to -30step -1;line 0,Z,3;next
Z
710 NT=4;MU=80;NT=0;V=rnd (11)-6;X=0;gosub 7
;NT=-1;@ (21)=-1;@ (23)=-1;@ (19)=10-2X;for Y=
26to 46step 4;X=X+V
720 box X-V,Y-4,1,1,3;box X,Y,1,1,3;next Y;@
(21)=0;@ (23)=0;@ (19)=0
799 return
800 CY=32;gosub 6;print "7TH_INNING_STRETCH!
;gosub 7;NT=8;for Z=-24573to -24471;MU=@ (Z);
next Z
810 gosub 7;gosub 7;NT=0;return

```

**BASEBALL** A 2-player, 9-inning game. Player 1 is visitor and bats first. Player 2 is home and pitches first. Pitcher uses either trigger or joystick to start each pitch. At the top of the screen, an arrow will move quickly under a series of letters plus asterisks. The batter, using his trigger, tries to stop the arrow under a letter (single, double, triple, and home run), because stopping under an asterisk yields an out. If the arrow goes all the way without stopping, it is a strike. A hit may be caught by the computer. All runners advance on hits, but will not tag up on fly balls. Extra innings will be played if the score is tied after nine innings. After the program is loaded, add the following without a line number - B=56; C=-5; D=23

Dave Martin  
3408 Braddock St.  
Kettering, OH 45420



Aug 24, 1984

# ARCADIAN

Vol 6 No 10

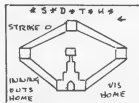
```

LOWERCASE = 1-BYTE KEYPAD WORDS, UNDERScores 500  &(17)=71;&(18)=85;&(22)=-1;for Z=60to 15
= SPACES,      1789 CHARACTERS
1  .10x165350020010x16535000006+5634560420060
667x1x27653210x1653500200102345600067x1__x1__
x176545600700x1
5  NT=0;@ (4)=0;@ (5)=0;BC=160;FC=4;goto 10
6  CX=-77;return
7  for Q=1to 150;next Q;return
8  box B,C,5,3,2;box 0,D,5,3,2;box -B,C,5,3,2
;box B,C,5,3,@ (0);box 0,D,5,3,@ (1);box -B,C,5
;3,@ (2);@ (P+3)=@ (P+3)+@ (3)=1)
9  CY=-26;CX=44;print "VIS",#2,@ (4);CX=38;pri
nt "HOME",#2,@ (5);return
10 clear ;S=21;X=-3;for A=-35to -6;X=X+2;box
X,A,S,1,1;box -X,A,S,1,1;next A;box 58,-4,S,
2,1;box -58,-4,S,2,1;for A=-3to 26
20 box X,A,S,1,1;box -X,A,S,1,1;X=X-2;next A
;A=-32;line 0,-34,0;line 58,C,2;line 0,25,2,1
;A=-58,C,2;line 0,-34,2;box 0,A,11,3,1
30 box 0,-34,3,1,2;box 0,A,5,3,2;box 0,-35,1
,1,2;box 0,-37,15,3,1;box -B,C,7,5,2;box B,C,
7,5,2;box 0,D,7,5,2
40 T=7;for Z=-24to -4step T;box 0,Z,T,13,1;T
=T-2;next Z;box 0,0,9,5,1;box 0,0,7,7,1
50 CX=-5;print "S&D*T*H";I=0
60 I=I+1;CY=-24;gosub 6;print "ING_",#1,I;fo
r P=1to 2;for Z=0to 3;@ (Z)=2;next Z;CY=-40;go
sub 6;if P=1print "VIS",;fgoto 70
65 print "HOME",
70 print "UP_",;gosub 8;for D=0to 2;S=0;CY=
-32;gosub 6;print "OUTS",#2,D
72 if I=7if P=2if D=0gosub 800
75 CY=32;gosub 6;print "STRIKE",#2,S,"-----
<",&(20)=0
80 NT=-1;if TR(P)goto 400
82 if &(18-P)=0goto 80
88 for CX=27to -21step -18;print "↑_",;if TR
(P)=0next CX;goto 400
90 H=CX-18;H=(H=15)x4+(H=3)x3+(H=-9)x2+(H=-2
1)if H=0goto 500
95 gosub 700;if rnd (3)=1CY=32;gosub 6;print
"FLY BALL CAUGHT!";gosub 7;goto 500
97 if H=&(21)=15;&(19)=20;&(20)=150;for Q=1
to 999;next Q;&(20)=0;&(21)=0;&(19)=0
100 for Z=1to H;for Y=3to 1step -1;@ (Y)=@ (Y-
1);next Y;@ (0)=2-(Z=1);gosub 8;NT=5;MU=64;NT=
0;next Z
120 if I>8if P=2if @ (4)<@ (5)goto 600
130 S=0;goto 75
400 print "___";S=S+1;&(22)=-1;&(16)=60;&(17)
=71;&(18)=85;gosub 7
410 if S<3&(22)=0;goto 75

```

**BASEBALL** A 2-player, 9-inning game. Player 1 is visitor and bats first. Player 2 is home and pitches first. Pitcher uses either trigger or joystick to start each pitch. At the top of the screen, an arrow will move quickly under a series of letters plus asterisks. The batter, using his trigger, tries to stop the arrow under a letter (single, double, triple, and home run), because stopping under an asterisk yields an out. If the arrow goes all the way without stopping, it is a strike. A hit may be caught by the computer. All runners advance on hits, but will not tag up on fly balls. Extra innings will be played if the score is tied after nine innings. After the program is loaded, add the following without a line number - B=56; C=-5; D=23

Dave Martin  
3408 Braddock St.  
Kettering, OH 45420



# ARCADIAN

LOWERCASE = 1-BYTE KEYPAD WORDS, UNDERSCORES  
= SPACES, 1767 CHARACTERS

```

6 S=0;A=400;B=700;C=0;X=0;Y=0;V=0;G=5;I=
0;H=300;clear ;BC=0;FC=117;J=32;M=44
9 for W=0 to 3;gosub 150+M;next W;gosub 800;g
osub 705
20 for N=1 to 4;gosub H+N;@N)=K;@N(4)=L;gos
ub A;next N;box X,Y,4,4,2
30 for W=1 to 5;if ABS(X)<24if ABS(Y)<20goto
38
34 for N=1 to 4;if ABS(X-@N))<8if ABS(Y-@N(
4))<5if PX(@N),@N(4))gosub 780;gosub H+N;@N
)=K;@N(4)=Lgoto 40
36 next N;goto 39
38 if ABS(X)<20if ABS(Y)<1goto 120
39 if (ABS(X)>28)+(ABS(Y)>0)goto 56
40 for P=-1 to 1step 2;if PX(X+3xP,Y)goto 500
42 next P;X=X+JX(1)xR
44 for P=-1 to 1step 2;if PX(X,Y+3xP)goto 550
46 next P;Y=Y+JY(1)xR;goto 62
56 if PX(X,Y)=0MU=59;MU=61;C=2;S=S+1;gosub 8
00;I=I+1;if I=60gosub 110;S=S+8;gosub 800;M=M
-1;J=J-1;I=I;for D=1 to 3;gosub 150+D;next D
57 if J=27;J=28;M=40
58 X=X+JX(1)xR;Y=Y+JY(1)xR
59 if ABS(X)>52X=-X+(R*(ABS(X)+X))
60 if ABS(Y)>36Y=-Y+(R*(ABS(Y)+Y))
62 box U,V,4,4,C;box X,Y,4,4,3;C=3;U=X;V=Y;M
U=52;E=E-1;if E=16BC=88
72 if E=0R=2
75 next W
80 for N=1 to 4;K=@N);L=@N(4);box K,L,8,4,2
;goto 200+Nx2
90 @N)=K;@N(4)=L;next N;goto 30
110 BC=0;R=4;E=48
112 NT=9;for Z=1 to 2;MU=68;MU=76;MU=68;MU=73
;next Z;for Z=1 to 2;MU=68;MU=75;MU=68;MU=72;n
ext Z;MU=68;MU=73;NT=3;return
120 if PX(X,Y)=0C=2;gosub 110
125 goto 58

```

```

150 for Z=-1 to 1step 2;box 24xZ,0,4,28,1;box
0,16xZ,44,4,1;box 24xZ,0,4,4,2;box 0,16xZ,4,
4,2;next Z;return
151 for Z=-1 to 1step 2;box 16xZ,0,2,18,1;box
16xZ,0,2,14,2;box 12xZ,0,2,18,1;box 12xZ,0,2
,14,2;next Z;return
152 for Z=-52 to 52step 104;for T=-28 to 28ste
p 4;box Z,T,2,2,1;next T;next Z;return
153 for Z=-36 to 36step 72;for T=-28 to 28step
4;box T,Z,2,2,1;next T;next Z;return
202 L=L-1;gosub A;if L=16gosub B;gosub H+N
203 goto 90
204 L=L+1;gosub A;if L=-16gosub B;gosub H+N
205 goto 90
206 K=K-1;gosub A;if K=26gosub B;gosub H+N
207 goto 90
208 K=K+1;gosub A;if K=-26gosub B;gosub H+N
209 goto 90
301 K=(rnd (4)-3)x11+5;L=J-rnd (3);return
302 K=(rnd (4)-3)x11+5;L=J+rnd (3);return
303 K=M-rnd (3);L=(rnd (4)-3)x8+4;return
304 K=-M-rnd (3);L=(rnd (4)-3)x8+4;return
400 box K,L,-1,8,1;box K+3,L,1,4,3;box K-4,
L,1,4,3;box K,L,-1,4,3;return
500 if JX(1)=-PX=X+JX(1)xR
510 goto 44
550 if JY(1)=-PY=Y+JY(1)xR
560 goto 62
700 box K,L,8,4,2;for Z=1 to 8;FC=8;MU=56;MU=
52;FC=117;next Z;gosub 150
705 G=6-1;CX=-40;CY=40;print #1,G;if S=0gosu
b 110;for Z=1 to B;next Z;CX=-24;CY=0;NT=0;pr
int "GAME_OVER";NT=26;MU=61;NT=0;if KPgoto 6_R
UN
710 return
780 box @N),@N(4),8,4,2;S=S+2;C=2;gosub 15
0;for Z=1 to 4;MU=64;MU=61;next Z
800 NT=0;CX=40;CY=40;print #1,S,#1,"00";NT=3
;return

```

LOWERCASE = 1-BYTE KEYPAD WORDS, UNDERSCORES  
= SPACES, 1767 CHARACTERS

```
6 S=0;A=400;B=700;C=0;D=0;E=0;F=0;G=5;I=
0;H=300;clear ;BC=0;FC=117;J=32;M=44
9 for W=0to 3;gosub 150+Winext W;gosub 800;g
osub 705
20 for N=1to 4;gosub H+N;B(N)=K;B(N+4)=L;gos
ub A;next N;box X,Y,4,4,2
30 for W=1to 5;if ABS(X)-24if ABS(Y)<20goto
38
34 for N=1to 4;if ABS(X-B(N))<8if ABS(Y-B(N+
4))<5if PX(B(N),B(N+4))gosub 780;gosub H+N;B(N
)=K;B(N+4)=Lgoto 40
38 next N;goto 39
36 if ABS(X)<20if ABS(Y)<10goto 120
39 if (ABS(X)>28)+(ABS(Y)>0)goto 56
40 for P=-1to 1step 2;if PX(X+3*P,Y)goto 500
42 next P;X=X+J(1)*R
44 for P=-1to 1step 2;if PX(X,Y+3*P)goto 550
46 next P;Y=Y+J(1)*R;goto 62
56 if PX(X,Y)=0MU=59;MU=1;C=2;S=S+1;gosub 8
00;I=I+1;if I=60gosub 110;S=S+8;gosub 800;M=M
-1;J=J-1;I=1;for D=1to 3;gosub 150+D;next D
57 if J=27;S=28;M=40
58 X=X+J(1)*R;Y=Y+J(1)*R
59 if ABS(X)>52X=X-R(ABS(X)+X))
60 if ABS(Y)>36Y=Y-R(ABS(Y)+Y))
62 box U,V,4,4;C;box X,Y,4,4;C=3;U=X;V=Y;M
U=52;E=E-1;if E=16C=88
72 if E=0R=2
75 next W
80 for N=1to 4;K=B(N);L=B(N+4);box K,L,8,4,2
;goto 200+N*2
90 B(N)=K;B(N+4)=L;next N;goto 30
110 BC=0;R=4;E=48
112 NT=9;for Z=1to 2;MU=68;MU=76;MU=68;MU=73
;next Z;for Z=1to 2;MU=68;MU=75;MU=68;MU=72;in
ext Z;MU=68;MU=73;NT=3;return
120 if PX(X,Y)=0C=2;gosub 110
125 goto 58
```

#### QUADROM (One Player)

This game challenges you to defend a four-walled energy fortress by pursuing and eliminating four monsters who are slowly impinging on the walls and intent on breaching through.

If a monster breaks completely through a wall (i.e. creates a "hole" or space the width of a wall) the fortress is destroyed. You start the game with a complement of four fortresses. The game ends when all four have been destroyed.

To eliminate a monster, you must move the joystick-controlled blip (it is in the center of the fortress when the game begins) toward the monster and "touch" it with the blip. The monster will then disappear. However, another will take its place on the same side of the wall at a distant starting point.

You will have a limited supply of energy with which to pursue the enemy. When you are running low on energy, the background color of the playfield will turn red as a warning.

This means you will soon have to return the fortress and eat one of the energy dots located inside. (to eat a dot move the blip over the dot) Otherwise, your speed will be cut in half and it will be very difficult to keep up with the monsters.

Eventually, you will set up the eight energy dots. To gain a new supply of these, it is necessary to eat all sixty of the bonus dots located near the four edges of the playfield (You will also receive sixty new bonus dots) When you accomplish this, the challenge will increase as the four monsters' starting points will move slightly closer to the fortresses

```
150 for Z=1to 1step 2;box 24X,0,4,28;1;box
0,16X,4,4,1;box 24X,0,4,4,2;box 0,16X,4,4,
2;next Z;return
151 for Z=1to 1step 2;box 16X,0,2,18;1;box
16X,0,2,14,2;box 12X,0,2,18;1;box 12X,0,2
,14,2;next Z;return
152 for Z=52to 52step 104;for T=-28to 28ste
p 4;box Z,T,2,2,1;next T;return
153 for Z=36to 36step 72;for T=-28to 28ste
p 4;box T,Z,2,2,1;next T;return
202 L=L-1;gosub A;if L=16gosub B;gosub H+N
203 goto 90
204 L=L+1;gosub A;if L=-16gosub B;gosub H+N
205 goto 90
206 K=K-1;gosub A;if K=26gosub B;gosub H+N
207 goto 90
208 K=K+1;gosub A;if K=-26gosub B;gosub H+N
209 goto 90
301 K=(rnd (4)-3)*11+5;L=J-rnd (3);return
302 K=(rnd (4)-3)*11+5;L=J-rnd (3);return
303 K=M-rnd (3);L=(rnd (4)-3)*8+4;return
304 K=M-rnd (3);L=(rnd (4)-3)*8+4;return
400 box K,L,-1,8,1;box K+3,L,-1,4,3;box K-4,
L,1,4,3;box K,L,-1,4,3;return
500 if JX(1)=-PX=X+JX(1)*R
510 goto 44
550 if JY(1)=-PY=Y+JY(1)*R
560 goto 62
700 box K,L,8,4,2;for Z=1to 8;FC=8;MU=56;MU=
52;FC=117;next Z;gosub 150
705 G=0;1;CX=-40;CY=40;print #1,6;if S=0gosu
b 110;for Z=1to B;next Z;CX=-24;CY=0;NT=0;pr
int "GAME OVER";NT=26;MU=61;NT=0;if KPgoto 6,R
UN
710 return
780 box B(N),B(N+4),8,4,2;S=S+2;C=2;gosub 15
0;for Z=1to 4;MU=64;MU=61;next Z
800 NT=0;CX=40;CY=40;print #1,S,*,00;NT=3
;return
```

In summary, then, the game action consists of eliminating monsters to protect the fortress and eating dots to ensure your energy supply.

There are three basic routes you can follow in moving about the playfield.

1. Moving around the outside perimeter of the walls.
2. Pressing through the inside of the fortress via the four openings in the walls.
3. Moving off one side of the playfield and appearing on the opposite side.

Use these alone and in combination to pursue monsters and eat dots.

#### SCORING

|                                 |            |
|---------------------------------|------------|
| Monster.....                    | 200 points |
| Bonus Dot.....                  | 100 points |
| All Sixty Bonus Dots Eaten..... | 800 points |

#### HAND CONTROL

|               |                                                           |
|---------------|-----------------------------------------------------------|
| Joystick..... | Move the stick in the direction you wish to move the blip |
| Trigger.....  | No Function                                               |
| Knob.....     | No Function                                               |

The number of fortresses you have remaining is displayed in the upper left-hand part of the screen, while the current score is shown in the upper right-hand corner.

To start a new game, press any key (except "H")



## THE GAME PLAYER

goes fishing ...

### SEA DEVIL Bit Fiddlers

Starfish, Octopi, Jellyfish, even submarines, are but a few of the underwater foes the brave game player must square off against in SEA DEVIL, the first cartridge released by Bit Fiddlers.

We were immediately impressed with the rich colors used in the graphics. The blue background, representing water, is very kind to the eyes. The underwater creatures are multi-colored and animated (cartoon-like), though one needs a very large video screen to appreciate the animation. Sound effects are ample, with the combined use of sound effects and color providing a unique and creative "GAME OVER" screen at the game's termination.

SEA DEVIL is a one player game, with a set skill level and one-time allotment of five ships. The game itself is almost identical to Astrocade's COSMIC RAIDERS. Interestingly enough, the only difference between the two games is the graphics. In one game you are in outer space and in the other you are underwater. In both games, however, you the player are doing the same thing: traveling left or right across a landscape shooting at objects coming toward you, and using a "radar screen" to get an advance look ahead.

A review of COSMIC RAIDERS is available in Arcadian Vol. 6 #3 page 23. In our review here of SEA DEVIL we are commenting only on the few differences that are unique to SEA DEVIL, one of which is the sea mines. These mines are released by "poachers" and require evasive action to avoid. They float at various depths, slowly rising and sinking. Contact with one, or with any creature, causes the loss of a ship. Occasionally a creature goes to the bottom to supposedly get food. Each time one does, the player loses points off his bonus score.

For each level (screen) that is cleared a new one appears and the game speed will increase. Essentially, SEA DEVIL plays the same as COSMIC RAIDERS. Both are good, enjoyable games. Personally, I prefer SEA DEVIL, because I like the graphics a little more.

Overall our panel of players gave SEA DEVIL a good rating. Graphics, sound, colors, action; all received good marks. There was some disappointment in that SEA DEVIL was so much like COSMIC RAIDERS, but that did not seem to deter anyone from enjoying the game. SEA DEVIL is a fine game in its own right and will make a nice addition to anyone's game collection.

MAIL BAG: Premiering in this issue is the new official SCOREBOARD format. Nineteen different games are now eligible for high scores. Those games with several skill level choices are presented with a high score for the easiest level and one for the most difficult level. If no one or few people submit scores for certain games, those games will be dropped from the current roster. Requests for adding other games, cartridges or cassette, will be considered.

RULES: To submit a score, you must play the game at the skill level and with the number of "lives" (ships, turns, balls, etc.) as listed on the official scoreboard roster. Write down your name, address, high score, game, skill level, lives, and mail it to: GAME PLAYER, c/o Michael Prosisie 48-G Ridge Road, Greenbelt, Maryland 20770. (Do not send scores to the Arcadian's San Jose address please.) No photograph of the t.v. screen is necessary (at this point), as we operate on the honor system.

## THE GAME PLAYER

goes fishing ...

### SEA DEVIL Bit Fiddlers

Starfish, Octopi, Jellyfish, even submarines, are but a few of the underwater foss the brave game player must square off against in SEA DEVIL, the first cartridge released by Bit Fiddlers.

We were immediately impressed with the rich colors used in the graphics. The blue background, representing water, is very kind to the eyes. The underwater creatures are multi-colored and animated (cartoon-like), though one needs a very large video screen to appreciate the animation. Sound effects are ample, with the combined use of sound effects and color providing a unique and creative "GAME OVER" screen at the game's termination.

SEA DEVIL is a one player game, with a set skill level and one-time allotment of five ships. The game itself is almost identical to Astrocade's COSMIC RAIDERS. Interestingly enough, the only difference between the two games is the graphics. In one game you are in outer space and in the other you are underwater. In both games, however, you the player are doing the same thing: traveling left or right across a landscape shooting at objects coming toward you, and using a "radar screen" to get an advance look ahead.

A review of COSMIC RAIDERS is available in Arcadian Vol. 6 #3 page 23. In our review here of SEA DEVIL we are commenting only on the few differences that are unique to SEA DEVIL, one of which is the sea mines. These mines are released by "poachers" and require evasive action to avoid. They float at various depths, slowly rising and sinking. Contact with one, or with any creature, causes the loss of a ship. Occasionally a creature goes to the bottom to supposedly get food. Each time one does, the player loses points off his bonus score.

For each level (screen) that is cleared a new one appears and the game speed will increase. Essentially, SEA DEVIL plays the same as COSMIC RAIDERS. Both are good, enjoyable games. Personally, I prefer SEA DEVIL, because I like the graphics a little more.

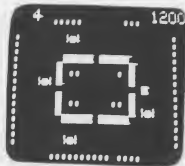
Overall our panel of players gave SEA DEVIL a good rating. Graphics, sound, colors, action: all received good marks. There was some disappointment in that SEA DEVIL was so much like COSMIC RAIDERS, but that did not seem to deter anyone from enjoying the game. SEA DEVIL is a fine game in its own right and will make a nice addition to anyone's game collection.

**MAIL BAG:** Premiering in this issue is the new official SCOREBOARD format. Nineteen different games are now eligible for high scores. Those games with several skill level choices are presented with a high score for the easiest level and one for the most difficult level. If no one or few people submit scores for certain games, those games will be dropped from the current roster. Requests for adding other games, cartridges or cassette, will be considered.

**RULES:** To submit a score, you must play the game at the skill level and with the number of "lives" (ships, turns, balls, etc.) as listed on the official scoreboard roster. Write down your name, address, high score, game, skill level, lives, and mail it to: GAME PLAYER, c/o Michael Prossie 48-G Ridge Road, Greenbelt, Maryland 20770. (Do not send scores to the Arcadian's San Jose address please.) No photograph of the t.v. screen is necessary (at this point), as we operate on the honor system.

© M.L. Prossie 1984

SCREEN OF QUADRON (p.91)



# Official ASTROCADE SCOREBOARD

| GAME                | SKILL | LIVES | SCORE    | NAME             |
|---------------------|-------|-------|----------|------------------|
| MUNCHER             |       |       | * 90,500 | Joe Adams        |
| COSMIC RAIDERS      | 1     | 3     |          |                  |
| COSMIC RAIDERS      | 9     | 3     | 11,150   | George Moses     |
| SOLAR CONQUEROR     | 1     | 3     | 23,957   | Dave Bercellie   |
| SOLAR CONQUEROR     | 9     | 3     |          |                  |
| THE WIZARD          | 1     |       | 453,200  | Stan Kendall     |
| THE WIZARD          | 3     |       |          |                  |
| BALLY PIN I         |       |       | 320,430  | Don Gladden      |
| BALLY PIN II        |       |       | *340,640 | Rick Mattice     |
| PIRATES CHASE       | 1     | 3     |          |                  |
| PIRATES CHASE       | 9     | 3     | 705,284  | Peggy Gladden    |
| GALACTIC INVASION   | 1     | 3     |          |                  |
| GALACTIC INVASION   | 9     | 3     |          |                  |
| SPACE FORTRESS      | 1     | 3     |          |                  |
| SPACE FORTRESS      | 9     | 3     | 9,550    | Michael Prosisie |
| BRICKYARD           | 1     | 6     | 1,875    | Kelly Prosisie   |
| BRICKYARD           | 4     | 6     |          |                  |
| MS. CANDYMAN        | 1     |       | 265,122  | Craig Conner     |
| MS. CANDYMAN        | 3     |       | 61,578   | Craig Conner     |
| SPACE INVADERS      | 1     |       | 7,045    | Stan Kendall     |
| SPACE INVADERS      | 4     |       |          |                  |
| SEA DEVIL           |       |       | 177,850  | Eric Allen       |
| SNEAKY SNAKE        |       |       | 56,457   | Joe Adams        |
| TREASURE COVE       | ?     | ?     | 32,817   | David Krec       |
| COLLISION COURSE    |       |       |          |                  |
| EXITOR'S REVENGE    |       |       | 31,575   | Fred Olivas      |
| DUNGEONS OF DRACULA |       |       | 3,440    | Al Showalter     |
| FLYING ACE          |       | 6     |          |                  |
| PACK RAT II **      |       |       |          |                  |
|                     |       |       |          |                  |
|                     |       |       |          |                  |

\*\*New version only

\*Indicates new high score

DEADLINE to submit scores for  
next issue is August 14.

# Official ASTROCADE SCOREBOARD

| GAME                | SKILL | LIVES | SCORE    | NAME            |
|---------------------|-------|-------|----------|-----------------|
| MUNCHER             |       |       | * 90,500 | Joe Adams       |
| COSMIC RAIDERS      | 1     | 3     |          |                 |
| COSMIC RAIDERS      | 9     | 3     | 11,150   | George Moses    |
| SOLAR CONQUEROR     | 1     | 3     | 23,957   | Dave Bercellie  |
| SOLAR CONQUEROR     | 9     | 3     |          |                 |
| THE WIZARD          | 1     |       | 453,200  | Stan Kendall    |
| THE WIZARD          | 3     |       |          |                 |
| BALLY PIN I         |       |       | 320,430  | Don Gladden     |
| BALLY PIN II        |       |       | *340,640 | Rick Mattice    |
| PIRATES CHASE       | 1     | 3     |          |                 |
| PIRATES CHASE       | 9     | 3     | 705,284  | Peggy Gladden   |
| GALACTIC INVASION   | 1     | 3     |          |                 |
| GALACTIC INVASION   | 9     | 3     |          |                 |
| SPACE FORTRESS      | 1     | 3     |          |                 |
| SPACE FORTRESS      | 9     | 3     | 9,550    | Michael Prosise |
| BRICKYARD           | 1     | 6     | 1,875    | Kelly Prosise   |
| BRICKYARD           | 4     | 6     |          |                 |
| MS. CANDYMAN        | 1     |       | 265,122  | Craig Conner    |
| MS. CANDYMAN        | 3     |       | 61,578   | Craig Conner    |
| SPACE INVADERS      | 1     |       | 7,045    | Stan Kendall    |
| SPACE INVADERS      | 4     |       |          |                 |
| SEA DEVIL           |       |       | 177,850  | Eric Allen      |
| SNEAKY SNAKE        |       |       | 56,457   | Joe Adams       |
| TREASURE COVE       | ?     | ?     | 32,817   | David Krec      |
| COLLISION COURSE    |       |       |          |                 |
| EXTOR'S REVENGE     |       |       | 31,575   | Fred Olivas     |
| DUNGEONS OF DRACULA |       |       | 3,440    | Al Showalter    |
| FLYING ACE          |       | 6     |          |                 |
| PACK RAT II **      |       |       |          |                 |
|                     |       |       |          |                 |
|                     |       |       |          |                 |

\*\*New version only

\*Indicates new high score

DEADLINE to submit scores for  
next issue is August 14.



```

1 .
2 .
3 .
4 . TOWER OF HANOI
5 . BY BOB WISEMAN
6 CLEAR;INPUT "HOW MANY BOXES?" R
7 @(0)=9
8 BC=159;FC=11
9 CLEAR;A=0;C=1
10 CX=-65
11 PRINT "TOWER OF HANOI",
12 FOR X=1TO 21
13   @(X)=0;NEXT X
14   @(X)=0;NEXT X
15   IF R? R=7
16   FOR T=RT0 1STEP -1
17     B=T;GOSUB 400;NEXT T
18   IF @(1)=0IF @(8)=0GOTO 900
19   IF @(1)=0IF @(15)=0GOTO 900
20   GOSUB 600;GOSUB 500
21   IF B=0GOTO 110
22   GOSUB 600;GOSUB 400
23   IF B=0GOTO 140
24   A=A+1
25   CX=60
26   PRINT #3,A,
27   GOTO 100
28   D=(C-1)b7+1
29   IF @D=0X=D;GOTO 430
30   FOR X=DT0 21
31     IF @(X)=0GOTO 420
32     NEXT X
33     IF B>@(X-1)GOTO 480
34     @(X)=B;GOSUB 700
35     B=0;GOTO 490
36     FOR X=1TO 5
37       MU="Z";NEXT X
38     RETURN
39     D=(C-1)b7+1;B=0
40     FOR X=DT0 21
41       IF @(X)=0GOTO 530
42       NEXT X
43       X=X-1
44       IF X<DGOTO 585
45       B=0(X);GOSUB 700

```

BOB WISEMAN  
118 ST. ANDREWS DR.  
CINCINNATI, OHIO 45245

```

560 @(X)=0
565 GOTO 599
585 FOR X=1TO 5
590 MU="Y";NEXT X
599 RETURN
600 IF &(16)=0MU="T";GOTO 620
610 GOTO 600
620 C=0;D=&(16)
630 IF D=4C=1
640 IF D=1C=2
650 IF D=8C=3
660 IF C=0GOTO 620
690 RETURN
700 Z=-72+36bC
705 Y=(X-1)c7
710 Y=-35+10bRM
720 W=5bB
730 BOX Z,Y,W,9,3
740 MU=B
790 RETURN
900 CLEAR
905 BC=6;FC=0
906 PRINT " ",
910 PRINT "YOU FINISHED "
920 PRINT " THE TOWER IN",#3,A," MOVES"
921 B=1;FOR X=1TO R
922 B=Bb2;NEXT X
924 A=A-B+1
925 IF A=0PRINT "GREAT WORK";GOTO 928
926 IF A<Rb2PRINT "NOT TOO BAD"
927 IF A>2bRPRINT "KEEP TRYING"
928 PRINT " YOU WASTED",#4,A," MOVES"
930 PRINT "PULL TRIGGER TO PLAY"
935 R=R+1
940 IF TR(1)=1GOTO 2
950 GOTO 940

```

# TOWER OF HANOI

THE OBJECT OF THIS PUZZLE IS TO REBUILD THE TOWER OF HANOI IN A NEW LOCATION. YOU WILL BE ASKED HOW MANY BLOCKS YOU WANT AND THESE WILL BE STACKED IN DESCENDING ORDER ON THE LEFT. NOW YOU MUST MOVE THEM AROUND TO REBUILD THE TOWER IN THE CENTER OR ON THE RIGHT. A LARGER BLOCK MAY NOT REST ON A SMALLER BLOCK. MOVING A BLOCK IS DONE IN TWO STAGES. FIRST, YOU ERASE IT, THEN YOU REDRAW IT. ONLY THE TOP BLOCK OF A STACK MAY BE MOVED. TO INDICATE WHICH STACK YOU WANT, USE THE HAND CONTROL.

```

1 .
2 .
3 .
4 . TOWER OF HANOI
5 . BY BOB WISEMAN
6 CLEAR ;INPUT "HOW MANY BOXES?" R
7 @(0)=9
8 BC=159;FC=11
9 CLEAR ;A=0;C=1
10 CX=-65
11 PRINT "TOWER OF HANOI",
12 FOR X=1TO 21
14 @(X)=0;NEXT X
16 IF R>7 R=7
20 FOR T=RT0 1STEP -1
30 B=T;GOSUB 400;NEXT T
100 IF @(1)=0IF @(8)=0GOTO 900
105 IF @(1)=0IF @(15)=0GOTO 900
110 GOSUB 600;GOSUB 500
130 IF B=0GOTO 110
140 GOSUB 600;GOSUB 400
160 IF B#0GOTO 140
165 A=A+1
166 CX=60
170 PRINT #3,A,
180 GOTO 100
400 D=(C-1)b7+1
402 IF @(D)=0X=D;GOTO 430
405 FOR X=DT0 21
410 IF @(X)=0GOTO 420
415 NEXT X
420 IF B>@(X-1)GOTO 480
430 @(X)=B;GOSUB 700
440 B=0;GOTO 490
480 FOR X=1TO 5
485 MU="Z";NEXT X
490 RETURN
500 D=(C-1)b7+1;B=0
510 FOR X=DT0 21
515 IF @(X)=0GOTO 530
520 NEXT X
530 X=X-1
540 IF X<DGOTO 585
550 B= @(X);GOSUB 700

```

BOB WISEMAN  
118 ST. ANDREWS DR.  
CINCINNATI, OHIO 45245

```

560 @(X)=0
565 GOTO 599
585 FOR X=1TO 5
590 MU="Y";NEXT X
599 RETURN
600 IF &(16)=0MU="T";GOTO 620
610 GOTO 600
620 C=0;D=&(16)
630 IF D=4C=1
640 IF D=1C=2
650 IF D=8C=3
660 IF C=0GOTO 620
690 RETURN
700 Z=-72+36bC
705 Y=(X-1)c7
710 Y=-35+10bRM
720 W=5bB
730 BOX Z,Y,W,9,3
740 MU=B.
790 RETURN
900 CLEAR
905 BC=6;FC=0
906 PRINT " ",
910 PRINT "YOU FINISHED "
920 PRINT " THE TOWER IN",#3,A," MOVES"
921 B=1;FOR X=1TO R
922 B=Bb2;NEXT X
924 A=A-B+1
925 IF A=0PRINT "GREAT WORK";GOTO 928
926 IF A<Rb2PRINT "NOT TOO BAD"
927 IF A>2bRPRINT "KEEP TRYING"
928 PRINT " YOU WASTED",#4,A," MOVES"
930 PRINT "PULL TRIGGER TO PLAY"
935 R=R+1
940 IF TR(1)=1GOTO 2
950 GOTO 940

```

```

=====
= T O W E R   O F   H A N O I
=====

```

THE OBJECT OF THIS PUZZLE IS TO REBUILD THE TOWER OF HANOI IN A NEW LOCATION. YOU WILL BE ASKED HOW MANY BLOCKS YOU WISH, AND THESE WILL BE STACKED IN DESCENDING ORDER ON THE LEFT. NOW YOU MUST MOVE THEM AROUND TO REBUILD THE TOWER IN THE CENTER OR ON THE RIGHT. A LARGER BLOCK MAY NOT REST ON A SMALLER BLOCK. MOVING A BLOCK IS DONE IN TWO STAGES. FIRST, YOU ERASE IT, THEN YOU REDRAW IT. ONLY THE TOP BLOCK OF A STACK MAY BE MOVED. TO INDICATE WHICH STACK YOU WANT, USE THE HAND CONTROL.

```

1 K=4;A=0
2 GOTO 9000
4 L=0;E=0;W=0
5 B=0;CLEAR
6 GOSUB 1000;X=0;Y=5;L=L+1
7 GOSUB 500
10 Z=M;Q=N
20 M=JX(1)*2;N=JY(1)*2
21 IF M=2IF N=2N=0;M=0
22 IF M=2IF N=2N=0;M=0
23 IF M=-2IF N=-2N=0;M=0
24 IF M=-2IF N=2M=0;N=0
25 E=E+1
26 B=0-70+E,-42,1,3,3
27 IF E>140GOTO 7000
30 IF M=0IF N=0M=2;N=Q
31 IF PX(X+Z,Y+Q)GOTO 7000
40 X=X+M;Y=Y+N
50 BOX X,Y,3,1,1;BOX X,Y,1,3,1
90 IF A=0GOTO 10
100 B=B+A
110 IF B>65A=-A
120 IF B<-65A=A
130 BOX B,0,15,3,2; BOX B-(A*8),0,3,3,1
140 GOTO 10
500 G= RND (60)-RND (60);H= RND (35)-RND (35)
511 IF PX(G+2,H)GOTO 500
512 IF PX(G-2,H)GOTO 500
513 IF PX(G,H-2)GOTO 500
514 IF PX(G,H+2)GOTO 500
520 BOX G,H,3,1,3
530 BOX G,H,1,3,1
540 BOX G,H,5,5,3
550 RETURN
1000 D=0;BOX 0,0,150,80,1;BOX0,0,146,76,2
1001 BOX 0,-42,140,1,1
1002 IF L=1GOTO 1030
1003 IF L=2GOTO 1011
1004 IF L=3BOX 0,20,56,3,1;BOX0-20,56,3,1;
BOX 0,0,3,29,3
1005 IF L=4BOX 0,0,90,50,1;BOX 3,0,90,46,2
1006 IF L=5BOX -40,0,3,50,1;BOX 40,0,3,50,1;
BOX 0,0,80,3,1
1007 IF L=6BOX 0,0,60,20,1;BOX 0,0,56,16,2
BOX 5,0,10,10,2;BOX 55,0,5,10,1;BOX
-55,0,5,10,1
1008 IF L=7BOX 25,20,90,5,1;BOX 25,-20,90,5,
1;BOX -25,0,90,5,1
1009 IF L=8 BOX 0,0,150,3,1;A=1;BOX 0,20,20,
5,1;BOX 0,-20,20,5,1
1010 RETURN
1011 BOX 0,0,80,3,1

```

[illegible]

Kevin O'Neill  
6 Wood-dale Drive  
St. Catharine's  
Ontario, Canada  
L2T 1Y8

## CATERPILLAR

A CREATION BY THADD<sup>3</sup>PRO

### DIRECTIONS

CATERPILLAR IS A GAME OF LUCK AND SKILL. YOU CONTROL THE DIRECTION OF TRAVEL OF YOUR CATERPILLAR AND TRY TO EAT THE FLOPPY DISKS THAT APPEAR ON THE SCREEN. BE CAREFUL- IF YOU TOUCH ANY WALLS OR THE TRAIL THAT YOU LEAVE YOUR HEAD GETS CRUSHED AND YOU DIE. YOU ALSO DIE IF THE TIMER AT THE BOTTOM OF THE SCREEN RUNS OUT. THERE ARE 7 DIFFERENT SCREENS AND EACH ONE GETS HARDER. SCORING WORKS BY THE MORE TIME YOU HAVE LEFT THE MORE POINTS YOU SCORE.

\* = multiplication sign

■ = space

8/24/84

# ARCADIAN

Vol 6 No 10

```

1 K=4;A=0
2 GOTO 9000
4 L=0;E=0;W=0
5 B=0;CLEAR
6 GOSUB 1000;X=0;Y=5;L=L+1
7 GOSUB 500
10 Z=M;Q=N
20 M=JX(1)*2;N=JY(1)*2
21 IF M=2IF N=2N=0;M=0
22 IF M=2IF N=-2N=0;M=0
23 IF M=-2IF N=-2N=0;M=0
24 IF M=-2IF N=2M=0;N=0
25 E=E+1
26 BOX -70+E,-42,1,3
27 IF E>140GOTO 7000
30 IF M=0IF N=0M=Z;N=Q
31 IF PX(X+Z,Y+Q)GOTO 7000
40 X=X+M;Y=Y+N
50 BOX X,Y,3,1,1;BOX X,Y,1,3,1
90 IF A=0GOTO 10
100 B=B+A
110 IF B>65A=-A
120 IF B<-65A=-A
130 BOX B,0,15,3,2;BOX B-(A*8),0,3,3,1
140 GOTO 10
500 G=NRND(60)-NRND(60);H=NRND(35)-NRND(35)
511 IF PX(G+2,H)GOTO 500
512 IF PX(G-2,H)GOTO 500
513 IF PX(G,H-2)GOTO 500
514 IF PX(G,H+2)GOTO 500
520 BOX G,H,3,1,3
530 BOX G,H,1,3,1
540 BOX G,H,5,5,3
550 RETURN
1000 D=0;BOX 0,0,150,80,1;BOX 0,0,146,76,2
1001 BOX 0,-42,140,1,1
1002 IF L=1GOTO 1030
1003 IF L=2GOTO 1011
1004 IF L=3BOX 0,20,56,3,1;BOX 0,-20,56,3,1;
      BOX 0,0,3,29,3
1005 IF L=4BOX 0,0,90,50,1;BOX 3,0,90,46,2
1006 IF L=5BOX -40,0,3,50,1;BOX 40,0,3,50,1;
      BOX 0,0,80,3,1
1007 IF L=6BOX 0,0,60,20,1;BOX 0,0,56,16,2;
      BOX 0,0,80,10,2;BOX 55,0,5,10,1;BOX
      -55,0,5,10,1
1008 IF L=7BOX 25,20,90,5,1;BOX 25,-20,90,5,
      1;BOX -25,0,90,5,1
1009 IF L=8BOX 0,0,150,3,1;A=1;BOX 0,20,20,
      5,1;BOX 0,-20,20,5,1
1010 RETURN
1011 BOX 0,0,80,3,1

```

```

1020 RETURN
1030 BOX 0,20,56,3,1;BOX 0,-20,56,3,1
1040 A=0;RETURN
2011 TA=X;TB=Y
7000 IF X>G-5IF X<G+5IF Y>H-5IF Y<H+5GOTO 8000
7010 VA=15;TA=20
7060 FOR T=0TO 5
7065 MO=T-50.
7070 BOX T+X,T+Y,1,1,BOX X+T,T+Y,1,1,1;
      BOX X+T,-T+Y,1,1,1
7080 BOX X,T+Y,1,1,BOX X,-T+Y,1,1,1
7090 BOX -T+X,T+Y,1,1,BOX -T+X,Y,1,1,1;
      BOX -T+X,-T+Y,1,1,1
7100 NEXT T
7110 FOR T=0TO 5
7115 MO=55-T
7120 BOX -T+X,T+Y,1,1,2;BOX X+T,T+Y,1,1,2;
      BOX X+T,-T+Y,1,1,2
7130 BOX X,T+Y,1,1,2;BOX X,-T+Y,1,1,2
7140 BOX -T+X,T+Y,1,1,2;BOX -T+X,Y,1,1,2;BOX
      -T+X,-T+Y,1,1,2
7150 NEXT T
7160 GOTO 9000
8000 W=W-(170-E)
8001 BOX 0,-42,140,3,2;BOX 0,-42,140,1,1
8003 NT=3;FOR J=0TO D;MU=D;NEXT J;NT=0
8005 D=D+1;E=0
8014 IF L=9IF D>KGOTO 10000
8015 IF D>KGOTO 6
8050 BOX G,H,5,5,2;GOTO 7
9000 W=0;CLEAR;CX=-25;CY=30;PRINT"THADD*PRO"
9004 PRINT;PRINT
9005 PRINT"YOUR SCORE WAS",W
9006 CX=-65;CY=-20;PRINT"*****"
      "R"
9007 CX=-65;CY=-27;PRINT"*****"
9008 FOR V=-69TO 65STEP 24;BOX V,-20,5,7,3;NEXT V
9009 FOR V=57TO 53STEP 24;BOX V,-27,5,7,3;NEXT V
9010 IF TR(1)GOTO 4
9020 GOTO 9008
10000 VA=15;TA=10;FOR I=30 TO 80;MO=I;NEXT I
10010 FOR I=80TO 30STEP -1;MO=I;NEXT I
10040 CX=-45;CY=0;PRINT"1000 EXTRA POINTS!"
10045 IF TR(1)=0GOTO 10000
10050 W=W+1000
10060 A=0;K=1
10070 GOTO 5

```

Kevin O'Neill  
5 Wood-dale Drive  
St. Catharines  
Ontario, Canada  
L2T 1Y8

## CATERPILLAR

A CREATION BY THADD\*PRO

### DIRECTIONS

CATERPILLAR IS A GAME OF LUCK AND SKILL. YOU CONTROL THE DIRECTION OF TRAVEL OF YOUR CATERPILLAR AND TRY TO EAT THE FLOPPY DISKS THAT APPEAR ON THE SCREEN. BE CAREFUL-IF YOU TOUCH ANY WALLS OR THE TRAIL THAT YOU LEAVE YOUR HEAD GETS CRUSHED AND YOU DIE. YOU ALSO DIE IF THE TIMER AT THE BOTTOM OF THE SCREEN RUNS OUT. THERE ARE 7 DIFFERENT SCREENS, AND EACH ONE GETS HARDER. SCORING WORKS BY THE MORE TIME YOU HAVE LEFT THE MORE POINTS YOU SCORE.

\* = multiplication sign

■ = space

# ARCADIAN

LOWERCASE = 1-BYTE KEYPAD WORDS, UNDERScores  
= SPACES, 1777 CHARACTERS

```

1 clear ;Z=4;F=0;K=-60
2 E=-33;M=0;N=36
3 I=60;J=-30
4 for A=1to 99;box B,C,1,1,3;B=rnd (150)-75;
C=rnd (99)-50;next A
5 box M,N,3,5,1;line M-3,N-7,4;line M,N,3;li
ne M+3,N-7,4;line M,N,3;box M,N+5,2,3,3;line
M+5,N+4,4;line M,N,3;line M-5,N+4,4
6 line M,N,3
7 box M,N+5,3,1,3
9 B=-36
10 for A=1to 128;box A-61,B,10,2,3
11 B=B+1
12 A=A+5
13 if A>125goto 10
14 if B>26goto 39
15 next A
39 box 0,-37,130,2,1;box 0,6,130,2,1;box 0,-
16,130,2,1;box 0,27,130,2,1
40 Z=6
41 A=-60;B=-27;C=A
42 box A,B,6,21,1;for D=B-Zto 26step 3;box C
,D,4,2,2
44 if D>-21if D<-17 A=60;B=-6;C=A;goto 42
45 if D>0if D<5 A=-60;B=17;C=A;Z=8;goto 42
48 next D
50 C=0;D=0;U=0;W=0
51 T=32;V=31
52 G=T;H=V
53 S=4;Z=4
55 A=T;B=V
57 Y=10;X=0
58 P=0;for Q=38to 31step -1;P=P+4;box P,Q,10
,4,3;box P,Q,10,4,3
59 next Q;box 32,31,10,4,3
60 box G,H,10,4,3
61 box A,B,10,4,Z
62 if J=33;CY=0;print "WON";STOP
64 G=G+Y
65 H=H+X
66 if G>I-6if G<I+6if H>J-6if H<J+6goto 300
67 if A=32if B=31if G=42if H<20;Z=3;C=10;D=0
;A=32;B=31;box G,H,10,4,3;goto 58
68 if A>I-6if A<I+6if B>J-6if B<J+6;goto 300
69 if T>I-6if T<I+6if V>J-6if V<J+6;goto 300

```

```

70 A=A+C
71 B=B+D
72 if A<-52C=10;D=0
73 if A>47C=-10;D=-2
74 if T=32if V=31if A<-54 S=3;U=10;W=0;T=32;
V=31;box A,B,10,4,3;box G,H,10,4,3;goto 58
75 box T,V,10,4,S
76 T=T+U
77 V=V+W
78 if T>49U=-10;W=-2
79 if T<-54U=10;W=0
86 if G<-52Y=10;X=0
90 if J=-10K=60
91 if J=12K=-60
99 if B<-30if A>48A=32;B=31;C=10;D=0;box G,H
,10,4,3;box T,V,10,4,3;goto 58
100 if V<-30if T>48T=32;V=31;U=10;W=0;box G,
H,10,4,3;box A,B,10,4,3;goto 58
101 if H<-30if G>48G=32;H=31;box A,B,10,4,3;
box T,V,10,4,3;goto 58
103 box G,H,10,4,3
104 box A,B,10,4,Z
105 box T,V,10,4,S
106 box G,H,7,2,3;box G,H,7,2,3
107 box T,V,7,2,3;box T,V,7,2,3
108 box A,B,7,2,2;box A,B,7,2,Z
111 if G>49Y=-10;X=-2
113 line I-2,J-6,4;line I,J,3
114 line I+2,J-6,4;line I,J,3
115 box I,J+5,2,3,3
116 box I,J+5,4,1,3
117 line I+4,J+3,4;line I,J,3
118 line I-4,J+3,4;line I,J,3
119 box I,J,3,5,3
120 if PX(I,J-7)-0;I=I+JX(1)*100+20
121 if I=K;J=J+JY(1)*100+30
122 box 60,-30,13,13,2
123 if PX(I,J-7)-0if TR(1)J=J+10
124 if PX(I,J-7)=0;J=J-2
125 if J<-37goto 300
150 box I,J,3,5,3
151 line I-2,J-6,4;line I,J,3
152 line I+2,J-6,4;line I,J,3
153 box I,J+5,2,3,3
154 box I,J+5,4,1,3
155 line I+4,J+3,4;line I,J,3
156 line I-4,J+3,4;line I,J,3
158 goto 60
300 CY=0;print "LOST"

```

SPACE APE is a version of the ladder-climbing problem. The object is to get to the top of the platform where the Ape is located. You must jump over barrels to avoid gettin hit, using the Trigger. There are three barrels in the way all the time. To climb the ladder, you must be directly in line with it. JY controls your direction, but don't fall off the edge!

Henry Sopko  
2705 King St. East #110  
Hamilton, ONT, Canada L8K-1Y4

LOWERCASE = 1-BYTE KEYPAD WORDS, UNDERScores  
= SPACES. 1777 CHARACTERS

```

1 clear ;Z=4;F=0;K=-60
2 E=-33;M=0;N=36
3 I=60;J=-30
4 for A=1to 99;box B,C,1,1,3;B=rnd (150)-75;
C=rnd (99)-50;next A
5 box M,N,3,5,1;line M-3,N-7,4;line M,N,3;li
ne M+3,N-7,4;line M,N,3;box M,N+5,2,3,3;line
M+5,N+4,4;line M,N,3;line M-5,N+4,4
6 line M,N,3
7 box M,N+5,3,1,3
9 B=-36
10 for A=1to 128;box A-61,B,10,2,3
11 B=B+1
12 A=A+5
13 if A>125goto 10
14 if B>26goto 39
15 next A
39 box 0,-37,130,2,1;box 0,6,130,2,1;box 0,-
16,130,2,1;box 0,27,130,2,1
40 Z=6
41 A=-60;B=-27;C=A
42 box A,B,6,21,1;for D=B-Zto 26step 3;box C
,D,4,2,2
44 if D>-21if D<-17 A=60;B=-64;C=A;goto 42
45 if D>0if D<5 A=-60;B=17;C=A;Z=8;goto 42
48 next D
50 C=0;D=0;U=0;W=0
51 T=32;V=31
52 G=T;H=U
53 S=4;Z=4
55 A=T;B=U
57 Y=10;X=0
58 P=0;for Q=38to 31step -1;P=P+4;box P,0,10
,4,3;box P,0,10,4,3
59 next Q;box 32,31,10,4,3
60 box G,H,10,4,3
61 box A,B,10,4,3
62 if J=33;CY=0;print "MON";STOP
64 G=0+Y
65 H=4+X
66 if G>1-61f G<1+61f H>J-61f H<J+61fgoto 300
67 if A=32if B=31if G=42if H<20;Z=3;C=10;D=0
;A=32;B=31;box G,H,10,4,3;goto 58
68 if A>1-61f A<1+61f B>J-61f B<J+61fgoto 300
69 if T>1-61f T<1+61f U>J-61f U<J+61fgoto 300

```

```

70 A=A+C
71 B=B+D
72 if A<-52C=10;D=0
73 if A>47C=-10;D=-2
74 if T=32if U=31if A<-54 S=3;U=10;W=0;T=32;
V=31;box A,B,10,4,3;box G,H,10,4,3;goto 58
75 box T,V,10,4,3
76 T=U+U
77 U=U+U
78 if T>49U=-10;W=-2
79 if T<-54U=10;W=0
86 if G<-52Y=10;X=0
90 if J=-10K=60
91 if J=12K=-60
99 if B<-30if A>48A=32;B=31;C=10;D=0;box G,H
,10,4,3;box T,V,10,4,3;goto 58
100 if U<-30if T>48T=32;V=31;U=10;W=0;box G,
H,10,4,3;box A,B,10,4,3;goto 58
101 if H<-30if G>48G=32;H=31;box A,B,10,4,3;
box T,V,10,4,3;goto 58
103 box G,H,10,4,3
104 box A,B,10,4,3
105 box T,V,10,4,3
106 box G,H,7,2,3;box G,H,7,2,3
107 box T,V,7,2,3;box T,V,7,2,3
108 box A,B,7,2,3;box A,B,7,2,3
111 if G>49Y=-10;X=-2
113 line I-2,J-6,4;line I,J,3
114 line I+2,J-6,4;line I,J,3
115 box I,J+5,2,3,3
116 box I,J+5,4,1,3
117 line I+4,J+3,4;line I,J,3
118 line I-4,J+3,4;line I,J,3
119 box I,J,3,5,3
120 if PX(I,J,-7)-0;I=I+X(1)x100+20
121 if I=K;J=J+Y(1)x100+30
122 box 60,-30,13,13,2
123 if PX(I,J,-7)-0if TR(I,J)=J+10
124 if PX(I,J,-7)=0;J=J-2
125 if JC-37goto 300
150 box I,J,3,5,3
151 line I-2,J-6,4;line I,J,3
152 line I+2,J-6,4;line I,J,3
153 box I,J+5,2,3,3
154 box I,J+5,4,1,3
155 line I+4,J+3,4;line I,J,3
156 line I-4,J+3,4;line I,J,3
158 goto 60
300 CY=0;print "LOST"

```

SPACE APE is a version of the ladder-climbing problem. The object is to get to the top of the platform where the Ape is located. You must jump over barrels to avoid getting hit, using the Trigger. There are three barrels in the way all the time. To climb the ladder, you must be directly in line with it. JY controls your direction, but don't fall off the edge!

Henry Sopko  
2705 King St. East #110  
Hamilton, ONT, Canada L8K-1Y4

# ASTROCADE

## Summer Sale

Now! Get your favorite Astrocade Cartridge for the lowest prices ever! Prices normally \$24.95 to 34.95 now \$4.95 each. Sale running to September 15, 1984.

Choose from the Following Titles:

2001 280Zzap/Dodgem  
2002 Seawolf/missile  
2003 Red Baron/Panzer Attack  
2004 Brickyard/Clowns  
2005 Star Battle  
2009 Astro Battle  
2010 Dogpatch  
2012 Space Fortress  
3001 Baseball  
3002 Football  
3005 Bally Pin  
4004 Biorhythm  
5002 Blackjack/Poker

We also are sorry to announce that the cartridges from Esoterica Ltd., Treasure Cove and BlastDroids are no longer available.

By the way, we still have in stock some of the newest games for the Astrocade, such as Cosmic Raiders, Solar Conqueror, Muncher, Ms. Candyman, Sea Devil, and Sneaky Snake. This group are not on sale.

Remember, Sale running to September 15 for all of the above cartridges--\$4.95 each also please include \$1.50 for shipping. Quantity is limited so buy now. Sale limited to existing stock. Once we are out--it is over

ABC Hobbycraft  
2155 E. Morgan  
Evansville IN 47711  
(812) 477-9661

# ASTROCADE

## Summer Sale

Now! Get your favorite Astrocade Cartridge for the lowest prices ever! Prices normally \$24.95 to 34.95 now \$4.95 each. Sale running to September 15, 1984.

Choose from the Following Titles:

- 2001 280Zzap/Dodgem
- 2002 Seawolf/missile
- 2003 Red Baron/Panzer Attack
- 2004 Brickyard/Crowns
- 2005 Star Battle
- 2009 Astro Battle
- 2010 Dogpatch
- 2012 Space Fortress
- 3001 Baseball
- 3002 Football
- 3005 Bally Pin
- 4004 Biorhythm
- 5002 Blackjack/Poker

We also are sorry to announce that the cartridges from Esoterica Ltd., Treasure Cove and BlastDrums are no longer available.

By the way, we still have in stock some of the newest games for the Astrocade, such as Cosmic Raiders, Solar Conqueror, Muncher, Ms. Candyman, Sea Devil, and Sneaky Snake. This group are not on sale.

Remember, Sale running to September 15 for all of the above cartridges--\$4.95 each also please include \$1.50 for shipping. Quantity is limited so buy now. Sale limited to existing stock. Once we are out--it is over

ABC Hobbycraft  
2155 E. Morgan  
Evansville IN 47711  
(812) 477-9661



NEXT ISSUE will be a biggie, but after a month's respite. Right, no issue for September. That's because the staff will be taking a lengthy vacation visiting Europe for the month of September. We'll land in Rome, and Eurailpass our way in a northwesterly direction, returning from England. The trip will sort of parallel the one we took four years ago. On our return, we'll start work on a double issue, which will also be the last issue for this Volume. We can still use more material for subsequent issues.

SUBSCRIPTION RATES FOR THE NEXT VOLUME will be identified in the next, October, issue.

FOR SALE - Electro-mechanical keyboard connects in parallel with Bally keyboard, relay driven, use one key for letters and numbers, shift key for words. Cost \$100.00 to build - make offer over \$35.00. Mike Pawlowski, 9294 Quandt, Allen Park, Mich. 48101 or call (313) 388-2162 after 5:00 p.m.

FOR SALE Bally Arcade units - brand new with two controllers and AstroBasic cartridge. Only 6 left at \$50 each plus \$5. for shipping. Cartridges available: Pinball, Dogpatch, Amazing Maze, Astro Zap, Letter Match, Acey-Ducey, SpeedMath, Basic, Galactic Invasion, \$7.50 each plus shipping. Others. John Capra, 232 Edgewood Ave., Thornwood, NY 10594 (914) 769- 6662

NEXT ISSUE will be a biggie, but after a month's respite. Right, no issue for September. That's because the staff will be taking a lengthy vacation visiting Europe for the month of September. We'll land in Rome, and Eurailpass our way in a northwesterly direction, returning from England. The trip will sort of parallel the one we took four years ago. On our return, we'll start work on a double issue, which will also be the last issue for this Volume. We can still use more material for subsequent issues.

SUBSCRIPTION RATES FOR THE NEXT VOLUME will be identified in the next, October, issue.

FOR SALE - Electro-mechanical keyboard connects in parallel with Bally keyboard, relay driven, use one key for letters and numbers, shift key for words. Cost \$100.00 to build - make offer over \$35.00. Mike Pawlowski, 9294 Quandt, Allen Park, Mich. 48101 or call (313) 388-2162 after 5:00 p.m.

FOR SALE Bally Arcade units - brand new with two controllers and AstroBasic cartridge. Only 6 left at \$50 each plus \$5. for shipping. Cartridges available: Pinball, Dogpatch, Amazing Maze, Astro Zap, Letter Match, Acey-Ducey, SpeedMath, Basic, Galactic Invasion, \$7.50 each plus shipping. Others. John Capra, 232 Edgewood Ave., Thornwood, NY 10594 (914) 769- 6662

AMERICAN FLAG, back on page 76, has a couple of errors: change two lines so that they read 220 X= -563;GOSUB C and 230 X= 15905; GOSUB C.

## 98

ARCADIAN

Robert Fabris, voyager  
3626 Morrie Drive  
San Jose, CA 95127

the SOURCE TCD 959

FIRST CLASS  
U S POSTAGE  
PAID

Sunnyvale, CA  
Permit No. 931

RETIRING ??? Yes, we are going to close down the presses with this issue, primarily because there isn't enough interest left out there to make it work. New subscribers are coming in at an ever decreasing rate, and we usually have only a 50% renewal rate, so the group gets ever tighter. Only a miniscule percentage of subscribers have been contributors - when we had thousands of subscribers that percentage was enough, but now with only a few hundred subscribers, there are too few to fill the Newsletter.

I might editorialize a bit on Mike Prossie's questions in his Game Player article. While there are tens of thousands of Arcade games out there, the distribution system has dropped to zero. This means that the stores, the outlets for sales of cartridges or tapes, have disappeared. How else can a manufacturer of a program communicate with the consumer? The only alternative is advertising - we collectively did some of that in Electronic Games - but it is very expensive for the little guy to do. And returns are really quite low.

CREDIT MISPLACED when we said that Rusty Blommaert had done the American Flag program of p.76. It was actually done by Barry Ellerson of 5017 N. River Rd, Schiller Park, IL, 60176. Rusty did have a hand in the 402 program in this issue.

ERRATA in Gas Well Bonanza, (p.85). We neglected to tell you about the variables:

S=RND(53)-63; T=RND(54)-19; P=1; U=12; V=102; FOR A=1 TO 4; V(A)=500; NEXT A

Joe will put his program on your tape for \$5, using his RShack CTR-60 machine (but no guarantee that his recorder is compatible) check his address on p. 85.

The following check list of company-produced cartridges will help you to determine if you have a complete set. Even so, 2020, 3006, 3007, 4003, 4005, and 5004 never made production.

#### Stock Number Description

##### 2000 ACTION/SKILLS SERIES

- ☐ 2001 280 ZZZAP/Dodge
- ☐ 2002 Seawolf/Missile
- ☐ 2003 Panzer Attack/Red Baron
- ☐ 2004 Brickyard/Clowns
- ☐ 2005 Star Battle
- ☐ 2009 Astro Battle
- ☐ 2010 Dogpatch
- ☐ 2011 Galactic Invasion
- ☐ 2012 Space Fortress
- ☐ 2014 Grand Prix/Demolition Derby
- ☐ 2015 Pirate's Chase
- ☐ 2017 The Incredible Wizard (Like Wizard of Wor)
- ☐ 2018 Solar Conqueror (Like Asteroids)
- ☐ 2019 Cosmic Raiders (Like Defenders)
- ☐ 2020 Missile Attack

##### 3000 SPORTS SERIES

- ☐ 3001 Baseball/Tennis/Hockey/Handball
- ☐ 3002 Football
- ☐ 3005 Astrocade Pinball

#### Stock Number Description

- ☐ 3006 Bowling
- ☐ 3007 Soccer

##### EDUCATIONAL SERIES

- ☐ 4001 Bingo Math/Speed Math
- ☐ 4002 Letter Match/Spell 'N Score/Crosswords
- ☐ 4003 Music Maker
- ☐ 4004 Biorhythm
- ☐ 4005 Creative Crayon
- ☐ 4005P Creative Crayon with Light Pen

##### STRATEGY SERIES

- ☐ 5001 Amazing Maze/Tic-Tac-Toe
- ☐ 5002 Blackjack/Poker/Acey-Ducey
- ☐ 5004 Conan the Barbarian
- ☐ 5005 Artillery Duel
- ☐ 6004 Astrocade BASIC System
- ☐ ACI-0200 Hand Controls (Set of 2)
- ☐ ABA1000 Astrocade, the Professional Arcade

Astrocade BASIC Cartridge & Audio Interface are included at no extra charge

RETIRING ??? Yes, we are going to close down the presses with this issue, primarily because there isn't enough interest left out there to make it work. New subscribers are coming in at an ever decreasing rate, and we usually have only a 50% renewal rate, so the group gets ever tighter. Only a miniscule percentage of subscribers have been contributors - when we had thousands of subscribers that percentage was enough, but now with only a few hundred subscribers, there are too few to fill the Newsletter.

I might editorialize a bit on Mike Prosis's questions in his Game Player article. While there are tens of thousands of Arcade games out there, the distribution system has dropped to zero. This means that the stores, the outlets for sales of cartridges or tapes, have disappeared. How else can a manufacturer of a program communicate with the consumer? The only alternative is advertising - we collectively did some of that in Electronic Games - but it is very expensive for the little guy to do. And returns are really quite low.

CREDIT MISPLACED when we said that Rusty Blommaert had done the American Flag program of p.76. It was actually done by Barry Ellerson of 5017 N.River Rd, Schiller Park, IL, 60176. Rusty did have a hand in the 402 program in this issue.

ERRATA in Gas Well Bonanza, (p.85). We neglected to tell you about the variables:

S=RND(53)-63; T=RND(54)-19; P=1; U=12; V=102; FOR A= 1 TO 4; V(A)=500; NEXT A

Joe will put his program on your tape for \$5, using his RShack CTR-60 machine (but no guarantee that his recorder is compatible) check his address on p. 85.

The following check list of company-produced cartridges will help you to determine if you have a complete set. Even so, 2020, 3006, 3007, 4003, 4005, and 5004 never made production.

| Stock Number                  | Description                                | Stock Number                      | Description                                                                 |
|-------------------------------|--------------------------------------------|-----------------------------------|-----------------------------------------------------------------------------|
| <input type="checkbox"/> 2001 | 280 ZZAP/Dodgem                            | <input type="checkbox"/> 3006     | Bowling                                                                     |
| <input type="checkbox"/> 2002 | Seawolf/Missile                            | <input type="checkbox"/> 3007     | Soccer                                                                      |
| <input type="checkbox"/> 2003 | Panzer Attack/Red Baron                    | <b>EDUCATIONAL SERIES</b>         |                                                                             |
| <input type="checkbox"/> 2004 | Brickyard/Cloons                           | <input type="checkbox"/> 4001     | Bingo Math/Speed Math                                                       |
| <input type="checkbox"/> 2005 | Star Battle                                | <input type="checkbox"/> 4002     | Letter Match/Spell 'N Score/ Crosswords                                     |
| <input type="checkbox"/> 2009 | Astro Battle                               | <input type="checkbox"/> 4003     | Music Maker                                                                 |
| <input type="checkbox"/> 2010 | Dogpatch                                   | <input type="checkbox"/> 4004     | Biorhythm                                                                   |
| <input type="checkbox"/> 2011 | Galactic Invasion                          | <input type="checkbox"/> 4005     | Creative Crayon                                                             |
| <input type="checkbox"/> 2012 | Space Fortress                             | <input type="checkbox"/> 4005P    | Creative Crayon with Light Pen                                              |
| <input type="checkbox"/> 2014 | Grand Prix/Demolition Derby                | <b>STRATEGY SERIES</b>            |                                                                             |
| <input type="checkbox"/> 2015 | Pirate's Chase                             | <input type="checkbox"/> 5001     | Amazing Maze/Tic-Tac-Toe                                                    |
| <input type="checkbox"/> 2017 | The Incredible Wizard (Like Wizard of War) | <input type="checkbox"/> 5002     | Blackjack/Poker/Acey-Ducey                                                  |
| <input type="checkbox"/> 2018 | Solar Conqueror (Like Asteroids)           | <input type="checkbox"/> 5004     | Conan the Barbarian                                                         |
| <input type="checkbox"/> 2019 | Cosmic Raiders (Like Defenders)            | <input type="checkbox"/> 5005     | Artillery Duel                                                              |
| <input type="checkbox"/> 2020 | Missile Attack                             | <input type="checkbox"/> 6004     | Astrocade BASIC System                                                      |
| <b>3000 SPORTS SERIES</b>     |                                            | <input type="checkbox"/> ACI-0200 | Hand Controls (Set of 2)                                                    |
| <input type="checkbox"/> 3001 | Baseball/Tennis/Hockey/Handball            | <input type="checkbox"/> ABA1000  | Astrocade, the Professional Arcade                                          |
| <input type="checkbox"/> 3002 | Football                                   |                                   | Astrocade BASIC Cartridge & Audio Interface are included at no extra charge |
| <input type="checkbox"/> 3005 | Astrocade Pinball                          |                                   |                                                                             |

OCTOBER 31, 1984



Vol 6 No 11/12

## MAZE AVENGER

BY DALE LOW

LOWERCASE = 1-BYTE KEYPAD WORDS. UNDERSCORES  
= SPACES. 1750 CHARACTERS

```

1 P=0;Z=3;L=Z;W=2;U=2
2 Y=-10;X=0
3 clear ;%(D)=-9999
4 box 0,-5,150,76,1;box 0,-5,145,70,2
7 box 0,-30,2,20,1;box 0,-20,28,2,1;box 0,10
,2,20,1;box 0,20,28,2,1
8 box -37,-10,47,2,1;box 36,-10,47,2,1;box 5
9,-15,2,12,1;box -59,-15,2,12,1
9 box -14,0,2,20,1;box 14,0,2,20,1;box -30,2
5,2,10,1;box 30,25,2,10,1
10 box -30,5,2,10,1;box 30,5,2,10,1;box -36,
10,14,2,1;box 36,10,14,2,1
11 box -62,0,25,2,1;box 62,0,25,2,1;box -53,
20,14,2,1;box 53,20,14,2,1
12 box -59,15,2,10,1;box 59,15,2,10,1;box -5
1,-30,16,2,1;box 51,-30,16,2,1
14 box -44,-25,2,10,1;box 44,-25,2,10,1
15 box -29,-25,2,10,1;box 29,-25,2,10,1;box
-23,-30,14,2,1;box 23,-30,14,2,1
20 for A=0to 2;*(X)=rnd(9);next A
21 for A=0to 2step 2;*(A)=rnd(10);15-B2
22 *(A+1)=rnd(7);10-45;next A
23 for A=0to 2step 2;CX=*(A);CY=*(A+1);TV=99
+rnd(4);next A
90 for Q=0to 2;X=X+((JX(1)=1)*X(PX(X+4,Y)=0))
-((JX(1)=1)*X(PX(X-4,Y)=0))
100 Y=Y+((JY(1)=1)*X(PX(X,Y+4)=0))-((JY(1)=1
)*X(PX(X,Y-4)=0));next Q
105 K=K+1;if K>129K=128
106 *(S)=K
110 gosub 111;goto 169
111 if Y>26Y=26
112 if X>68X=68
113 if X<-68X=-68
120 if Y<-37Y=-37
130 H=X+76;V=ABS(Y-40);%(C)=Vx256+H;CALLB;%(
D)=%(C);%(T)=%(S);return
169 MU=10;if rnd(30-U)=1;goto 700
170 if TR(1)=0;goto 90
180 MU=88;F=JY(1)*3;G=JX(1)*3;I=X+G;J=Y+F;fo
r Q=0to 80
230 I=I+Gx2;J=J+Fx2
235 for A=0to 2step 2
236 if *(A)if I+7>8(A)if I-7<8(A)if J+5>8(A)
11;J-5<8(A+1);goto 500
237 next A
240 box I,J,2,2,3;box I,J,2,2,3
250 if (PX(I,J))+*(PX(I+2,J))+*(PX(I-2,J))+*(PX
(I,J+2))+*(PX(I,J-2))=8;
260 next Q;MU=82;MU=85;goto 90

```

```

500 for M=99to 80step -2;MU=M;MU=M+2;MU=M+4;
next M
505 box *(A),*(A+1),10,8,2;CX=*(A);CY=*(A+1)
;TV=*(A)+48
510 P=P+*(A);*(A)=0;for M=0to 500;next M;box
*(A),*(A+1),10,8,2;W=W-1;if W=0;goto 530
520 U=U+(U<5);Z=Ux2-1;W=U;P=P+27;for A=79to
99;MU=M;MU=A+2;MU=M+4;next A;goto 20
530 CY=40;CX=0;print #0,P;Q=81;goto 237
700 NT=9;MU=83;MU=73;MU=63;NT=1
710 M=7;N=5;A=0
720 A=A+1;if A>25;goto 90
730 M=M+(rnd(3)-2)*14;N=N+(rnd(3)-2)*10
740 M=M+(M<-65)*14-(M>65)*14
745 N=N+(N<-35)*10-(N>35)*10
750 box M,N,5,5,3;box M,N,5,5,3
770 X=X+JX(1)*9;Y=Y+JY(1)*9;gosub 111
790 if M>X-29if M<X+29if M<Y+29if M>Y-29for
Q=0to 2;line M,N,0;line X,Y,3;next Q;L=L-1;go
to (L=0)*800+90
795 goto 720

```

## INPUT THE FOLLOWING DATA ARRAY

```

%( 20237)= 8669
%( 20239)= 20258
%( 20241)= -43
%( 20243)= 26163
%( 20245)= 10298
%( 20247)= 128
%( 20249)= 13311
%( 20251)= 14950
%( 20253)= -32728
%( 20255)= -12032
%( 20257)= -32567
%( 20259)= 0
%( 20261)= 1537
%( 20263)= 20265
%( 20265)= 7492
%( 20267)= 16141
%( 20269)= 4652
%( 20271)= 7692
%( 20273)= 16172
%( 20275)= 4621
%( 20277)= -223

```

AFTER ENTERING THE PROGRAM AND THE DATA ARRAY  
PRINT THE WHOLE THING TO TAPE LIKE THIS:  
\* PRINT % (16384),2000  
THIS WILL SAVE YOUR DATA TOO.

Dale Low  
3020 Cook St  
VICTORIA BC  
V8T 3S9  
CANADA

```

1 Q=0;CLEAR ;NT=0;CX=-30;CY=0;PRINT "LIZARD LUNCH";FC=34;BOX 0,0,140,25,3;FOR A
=0TO 180;&(10)=A;NEXT A
2 IF TR(1)NT=0;GOTO 700
3 GOTO 2
10 CLEAR ;BC=8;FC=140;S=0;T=5
11 BOX 0,0,160,80,3;BOX 0,0,156,76,3
12 CX=30;CY=30;PRINT "FLY #"
13 CX=30;CY=-18;PRINT "TIME:
20 BOX 44,0,4,14,1;BOX 43,0,2,10,3;BOX 47,0,14,6,1;BOX 56,0,10,14,1;BOX 60,0,2,1
8,1
21 BOX 41,1,2,1,3;BOX 41,-2,2,1,3;BOX 39,0,1,4,1;BOX 58,0,8,8,2
22 BOX 58,0,10,4,1;BOX 65,0,20,2,1
30 LINE 38,0,4
40 X=JX(1)b30-90;Y=KN(1)c84b30
50 IF TR(1)MU="a";LINE X,Y,3;LINE 38,0,3;LINE X,Y,3;LINE 38,0,3;IF X=HIF Y=UGOSU
B 550
60 T=T-1;IF T<1GOSUB 500
70 J=RND (10)+75;MU=J
71 Q=Q+1;IF Q>200GOTO 650
72 IF S>20NT=10;MU="↑";MU="↓";NT=50;MU="a";NT=0;GOTO 600
80 GOTO 40
500 BOX H,U,12,12,2;H=RND (3)b30-90;U=RND (3)b30-60;T=RND (P+1)
501 BOX H,U,3,8,1;BOX H,U,1,11,3;BOX H,U,11,1,1;BOX H+5,U,2,3,3;RETURN
550 M=12;FOR A=0TO 1STEP -1;FC=RND (10)b10;BOX X,Y,M,M,3;BOX X,Y,M,M,2;MU=M;M=M-
1;NEXT A;FC=140;S=S+1
551 CX=10;CY=18;PRINT S;GOTO 500
600 CX=18;CY=-30;PRINT Q;CX=-30;CY=0;PRINT "GAME OVER";BC=0;BOX 0,0,160,80,3
601 IF TR(1)FOR A=180TO 0STEP -1;&(10)=A;NEXT A;RUN
602 GOTO 601
650 CX=-40;CY=15;PRINT "DEAD LIZARD!";BOX 42,-8,40,10,2;BOX 41,1,2,1,3;GOTO 600
700 FOR A=180TO 0STEP -1;&(10)=A;NEXT A
701 CLEAR ;FC=107;BC=7;CX=-60;CY=30;PRINT "ENTER DIFFICULTY
702 BOX 0,30,160,20,3
703 CX=-40;CY=15;PRINT "1-MONITOR LIZARD
704 CX=-40;CY=6;PRINT "2-SALAMANDER
705 CX=-40;CY=-3;PRINT "3-TADPOLE
706 FOR A=0TO 180;&(10)=A;NEXT A
707 P=KN(1)c84+2
708 IF TR(1)NT=1;GOTO 10
709 CX=-70;CY=-35;PRINT P
710 GOTO 707

```

a = →  
b = x  
c = ÷  
- = ←  
' = ↓

```

1 Q=0;CLEAR ;NT=0;CX=-30;CY=0;PRINT "LIZARD LUNCH";FC=34;BOX 0,0,140,25,3;FOR A
=0TO 180;&(10)=A;NEXT A
2 IF TR(1)NT=0;GOTO 700
3 GOTO 2
10 CLEAR ;BC=8;FC=140;S=0;T=5
11 BOX 0,0,160,80,3;BOX 0,0,156,76,3
12 CX=30;CY=30;PRINT "FLY #"
13 CX=30;CY=-18;PRINT "TIME:
20 BOX 44,0,4,14,1;BOX 43,0,2,10,3;BOX 47,0,14,6,1;BOX 56,0,10,14,1;BOX 60,0,2,1
8,1
21 BOX 41,1,2,1,3;BOX 41,-2,2,1,3;BOX 39,0,1,4,1;BOX 58,0,8,8,2
22 BOX 58,0,10,4,1;BOX 65,0,20,2,1
30 LINE 38,0,4
40 X=JX(1)b30-30;Y=KN(1)c84b30
50 IF TR(1)MU="a";LINE X,Y,3;LINE 38,0,3;LINE X,Y,3;LINE 38,0,3;IF X=HIF Y=VGOSU
B 550
60 T=T-1;IF T<160SUB 500
70 J=RND (10)+75;MU=J
71 Q=Q+1;IF Q>200GOTO 650
72 IF S>20NT=10;MU="^";MU="_" ;NT=50;MU="a";NT=0;GOTO 600
80 GOTO 40
500 BOX H,U,12,12,2;H=RND (3)b30-90;U=RND (3)b30-60;T=RND (P+1)
501 BOX H,U,3,9,1;BOX H,U,1,11,3;BOX H,U,11,1,1;BOX H+5,U,2,3,3;RETURN
550 M=12;FOR A=MTO 1STEP -1;FC=RND (10)b10;BOX X,Y,M,M,3;BOX X,Y,M,M,2;MU=M;M=M-
1;NEXT A;FC=140;S=S+1
551 CX=10;CY=18;PRINT S;GOTO 500
600 CX=18;CY=-30;PRINT Q;CX=-30;CY=0;PRINT "GAME OVER";BC=0;BOX 0,0,160,80,3
601 IF TR(1)FOR A=180TO 0STEP -1;&(10)=A;NEXT A;RUN
602 GOTO 601
650 CX=-40;CY=15;PRINT "DEAD LIZARD!";BOX 42,-8,40,10,2;BOX 41,1,2,1,3;GOTO 600
700 FOR A=180TO 0STEP -1;&(10)=A;NEXT A
701 CLEAR ;FC=107;BC=7;CX=-60;CY=30;PRINT "ENTER DIFFICULTY
702 BOX 0,30,160,20,3
703 CX=-40;CY=15;PRINT "1-MONITOR LIZARD
704 CX=-40;CY=6;PRINT "2-SALAMANDER
705 CX=-40;CY=-3;PRINT "3-TADPOLE
706 FOR A=0TO 180;&(10)=A;NEXT A
707 P=KN(1)c84+2
708 IF TR(1)NT=1;GOTO 10
709 CX=-70;CY=-35;PRINT P
710 GOTO 707

```

a = →  
b = x  
c = ∴  
- = ←  
' = ↓

```

1 .350003135600031357b17b1b2b150000
2 GOSUB 38;CLEAR;GOTO 70
3 BOX X,Y,11,11,1;BOX X,Y,9,9,2;RETURN
4 BOX X,Y,1,1,1;RETURN
5 BOX X+2,Y+2,1,1,1;BOX X-2,Y-2,1,1,1;RETURN
6 GOSUB 4;GOSUB 5;RETURN
7 GOSUB 5;BOX X-2,Y+2,1,1,1;BOX X+2,Y-2,1,1,1;RETURN
8 GOSUB 7;GOSUB 4;RETURN
9 GOSUB 7;BOX X,Y+2,1,1,1;BOX X,Y-2,1,1,1;RETURN
10 X=-43;Y=35;FOR N=1TO 6;A=RND (6)+3;@(N)=A;IF @(N+6)X=X+17;NEXT N;RETURN
11 GOSUB 3;GOSUB A;X=X+17;NEXT N;RETURN
12 B=RND (6);FOR M=1TO B;GOSUB 10;NEXT M;RETURN
13 IF R>50IF R<-35X=-43;GOSUB 20;GOSUB @(1);@(7)=1;U=1;GOSUB 21
14 IF R>-35IF R<-16X=-25;GOSUB 20;GOSUB @(2);@(8)=1;U=2;GOSUB 21
15 IF R>-16IF R<0X=-8;GOSUB 20;GOSUB @(3);@(9)=1;U=3;GOSUB 21
16 IF R>0IF R<17X=9;GOSUB 20;GOSUB @(4);@(10)=1;U=4;GOSUB 21
17 IF R>17IF R<33X=26;GOSUB 20;GOSUB @(5);@(11)=1;U=5;GOSUB 21
18 IF R>33IF R<49X=43;GOSUB 20;GOSUB @(6);@(12)=1;U=6;GOSUB 21
19 RETURN
20 Y=35;BOX X,Y,12,12,2;Y=15;GOSUB 3;RETURN
21 IF @(U)=8U=50
22 IF @(U)=4U=100
23 GOSUB 24;U=0;RETURN
24 GOSUB 25;CX=43;S=S+U;PRINT #0,S;RETURN
25 CY=- (P-1)b8-5;CX=-4;RETURN
26 Z=200;IF P=1FC=137;G=G+S;GOSUB 25;PRINT #4,G;IF G>DGOTO Z
27 IF P=2FC=240;H=H+S;GOSUB 25;PRINT #4,H;IF H>DGOTO Z
28 IF P=3FC=89;I=I+S;GOSUB 25;PRINT #4,I;IF I>DGOTO Z
29 IF P=4FC=107;J=J+S;GOSUB 25;PRINT #4,J;IF J>DGOTO Z
30 PRINT "UP";RETURN
31 FOR Z=7TO 12;@(Z)=0;NEXT Z;RETURN
32 CY=-37;RETURN
33 GOSUB 32;PRINT " TO ROLL DICE PUSH JY UP";RETURN
34 GOSUB 32;PRINT " USE TRIGGER TO SAVE DICE";RETURN
37 GOSUB 32;PRINT " YOUR OPT. TO ROLL AGAIN";RETURN
38 NT=13;FOR Z=-24573TO -24538;MU=Z;NEXT Z;NT=0;RETURN
39 BOX R,0,20,8,2;BOX R,0,1,6,1;LINE R-3,0,4;LINE R,0+3,1;LINE R+3,0,1
40 IF R>49BOX R,0,15,8,2;R=-43
41 RETURN
44 BOX 0,26,120,35,2;RETURN
45 GOSUB 32;INPUT "INPUT 1-6 TO SCORE 3 DIE*K;IF K=1U=700
46 IF K=2U=200
47 IF K=3U=300
48 IF K=4U=400
49 IF K=5U=350
50 IF K=6U=600
51 GOSUB 24;U=0;GOSUB 32;PRINT " NOW MOVE THE DICE DOWN ";RETURN
52 P=P+1;GOSUB 44;T=0;C=0;S=0;BOX 44,-17,55,32,2;GOSUB 31;GOSUB 33;IF P>L P=1
53 RETURN
70 P=1;C=0;G=0;H=0;I=0;J=0;S=0;GOSUB 31;D=4999;T=0;Q=25;BC=5
80 CY=0;INPUT "***NUMBER*OF*PLAYERS?"L;IF L>4L=4
90 CLEAR ;CY=-5;FOR N=1TO L;PRINT "aPLAYER #",#0,N,"";NEXT N
100 CY=5;CX=-5;PRINT "TOTAL PRESENT";GOSUB 26;GOSUB 33
110 IF JY(P)=1BOX 0,31,120,19,2;GOSUB 12;C=1;GOSUB 34
120 IF JX(P)=1GOSUB 52;GOSUB 26
125 IF TR(P)=T+1;GOSUB 13;IF T=6T=0;GOSUB 44;GOSUB 37;GOSUB 31;C=0;GOSUB 38
130 IF JY(P)=-1BOX R,0,9,8,2;GOSUB 45
140 IF JX(P)=-1GOSUB 26;GOSUB 52;GOSUB 26
150 R=R+4;GOSUB 40;IF CGOSUB 39
160 GOTO 110
200 GOSUB 44;CY=35;PRINT " GAME OVER PLAYER #",#0,P," WINS";GOSUB 38

```

b means x

C means ÷



```

1 .350003135500031357b17b17b1b2b150000
2 GOSUB 30: CLEAR :GOTO 70
3 BOX X,Y,11,11,1:BOX X,Y,9,9,2:RETURN
4 BOX X,Y,1,1,1:RETURN
5 BOX X+2,Y+2,1,1,1:BOX X-2,Y-2,1,1,1:RETURN
6 GOSUB 4:GOSUB 5:RETURN
7 GOSUB 5:BOX X-2,Y+2,1,1,1:BOX X+2,Y-2,1,1,1:RETURN
8 GOSUB 7:GOSUB 4:RETURN
9 GOSUB 7:BOX X,Y+2,1,1,1:BOX X,Y-2,1,1,1:RETURN
10 X=-43:Y=35:FOR N=1TO 5:A=RND (6)+3:@(N)=A:IF @(N+6)X=X+17:NEXT N:RETURN
11 GOSUB 3:GOSUB A:X=X+17:NEXT N:RETURN
12 B=RND (6):FOR M=1TO B:GOSUB 10:NEXT M:RETURN
13 IF R>50IF R<-35X=-43:GOSUB 20:GOSUB @(1):@(7)=1:U=1:GOSUB 21
14 IF R>-35IF R<-16X=-25:GOSUB 20:GOSUB @(2):@(8)=1:U=2:GOSUB 21
15 IF R>-16IF R<0X=-8:GOSUB 20:GOSUB @(3):@(9)=1:U=3:GOSUB 21
16 IF R>0IF R<17X=9:GOSUB 20:GOSUB @(4):@(10)=1:U=4:GOSUB 21
17 IF R>17IF R<33X=26:GOSUB 20:GOSUB @(5):@(11)=1:U=5:GOSUB 21
18 IF R>33IF R<49X=43:GOSUB 20:GOSUB @(6):@(12)=1:U=6:GOSUB 21
19 RETURN
20 Y=35:BOX X,Y,12,12,2:Y=15:GOSUB 3:RETURN
21 IF @(U)=0U=50
22 IF @(U)=4U=100
23 GOSUB 24:U=0:RETURN
24 GOSUB 25:CY=43:S=S+U:PRINT #0,S:RETURN
25 CY=(-(P-1))b5:CY=-4:RETURN
26 Z=200:IF P=1FC=137:G=G+S:GOSUB 25:PRINT #4,G,:IF G>DGOTO Z
27 IF P=2FC=240:H=H+S:GOSUB 25:PRINT #4,H,:IF H>DGOTO Z
28 IF P=3FC=89:I=I+S:GOSUB 25:PRINT #4,I,:IF I>DGOTO Z
29 IF P=4FC=107:J=J+S:GOSUB 25:PRINT #4,J,:IF J>DGOTO Z
30 PRINT " _UP":RETURN
31 FOR Z=7TO 12:@(Z)=0:NEXT Z:RETURN
32 CY=-37:RETURN
33 GOSUB 32:PRINT " TO ROLL DICE PUSH JY UP↑":RETURN
34 GOSUB 32:PRINT " USE TRIGGER TO SAVE DICE":RETURN
37 GOSUB 32:PRINT " YOUR OPT. TO ROLL AGAIN":RETURN
38 NT=13:FOR Z=-24573TO -24530:MU=Z(NEXT Z:NT=0:RETURN
39 BOX R,Q,20,2,2:BOX R,Q,1,6,1:LINE R-3,Q,4:LINE R,Q+3,0,1
40 IF R>49BOX R,Q,15,8,2:R=-49
41 RETURN
44 BOX 0,26,120,35,2:RETURN
45 GOSUB 32:INPUT "INPUT 1-6 TO SCORE 3 DIE^K:IF K=1U=700
46 IF K=2U=200
47 IF K=3U=300
48 IF K=4U=400
49 IF K=5U=350
50 IF K=6U=600
51 GOSUB 24:U=0:GOSUB 32:PRINT " NOW MOVE THE DICE DOWN ":RETURN
52 P=P+1:GOSUB 44:T=0:C=0:S=0:BOX 44,-17,55,32,2:GOSUB 31:GOSUB 33:IF P>L P=1
53 RETURN
70 P=1:C=0:G=0:H=0:I=0:J=0:S=0:GOSUB 31:D=4999:T=0:Q=25:BC=5
80 CY=0:INPUT " ***NUMBER*OF*PLAYERS?*L:IF L>4L=4
90 CLEAR :CY=-5:FOR N=1TO L:PRINT "aPLAYER #",@0,N,"":NEXT N
100 CY=5:CY=-5:PRINT "TOTAL PRESENT":GOSUB 26:GOSUB 33
110 IF JY(P)=1BOX 0,31,120,19,2:GOSUB 12:C=1:GOSUB 34
120 IF JX(P)=1GOSUB 52:GOSUB 26
125 IF TR(P)=T+1:GOSUB 13:IF T=6T=0:GOSUB 44:GOSUB 37:GOSUB 31:C=0:GOSUB 38
130 IF JY(P)=-1BOX R,Q,9,8,2:GOSUB 45
140 IF JX(P)=-1GOSUB 26:GOSUB 52:GOSUB 26
150 R=R+4:GOSUB 40:IF CGOSUB 39
160 GOTO 110
200 GOSUB 44:CY=35:PRINT " GAME OVER PLAYER #",#0,P," WINS":GOSUB 38

```

b means x

C means ÷


# CRAZIE DICE RULES

This is a game of chance, strategy, and greed. The object is to be the first player to reach 5,000 points.


You start by rolling six dice. If you don't get a pointer (a one, a five, or three of a kind) on the first or subsequent roll(s) you must pass the play to the next player without adding your present score to your total. You must save at least one pointer on each roll of the dice. If you get pointers on all six dice, you have the option to roll again (greed) but remember any time you roll again and don't get a pointer you must pass play without adding to your total. Three of a kind need not be side by side, but must be on a single roll of the dice. Two to four players. Different colors for each player.



Trigger: Moves a die from the top row (the dice you roll) to the bottom row (the dice you save)



Joystick:

|                                                            |                                                                                   |                                                                  |
|------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------|
|                                                            | Rolls dice                                                                        |                                                                  |
| Adds present score to total and passes play to next player |  | Passes play to next player without adding present score to total |
|                                                            | Adjust score for saving 3 of a kind (do this before moving dice down)             |                                                                  |

Point value: A  = 50pt.

A  = 100pt.

3  = 1000pt.      3  = 200pt.

3  = 300pt.      3  = 400pt. Etc.

Extra 2's, 3's, 4's, 6's don't count extra points.

An optional rule for crazie dice: We call it "getting on the board". Simply, your present score must be 500 or more before you can add it to your total. After that, your "on the board" and may save any amount less than or greater than 500 if you choose.

# D-D-DIGITAL MANIA

We've done a lot of basic programming and maybe even a little machine language. So, what's left? Is there any thing else I can do with my computer?

YOU BET! There is no reason why your Astrocade could not be controlling a robot, guarding your home, or talking.

Of course, these projects would require considerable experience with electronics, mechanics, and machine code to bring them about. But that doesn't mean we can't learn what it's all about.

One thing that we were blessed with is our microprocessor is a Z-80. This MPU is especially suited for this sort of thing. Another is the expansion bus in the back of the machine. These 50 connections provide us with everything we need, to do any thing we want.

If this sounds simple, it isn't. But, in a while, you will, at least understand it.

Now, DON'T go probing around with a bunch of wires to see what might happen. You could easily damage your machine, permanently!! The purpose of this series is to try explaining the use and operation of these control lines, address lines, and data lines and to, eventually, put them to use. So let's get started.

First off, IF statements are a form of logic that control the flow of a program, that is, true/false, on/off. And if you've, at least, played with machine code, you should be acquainted with "1"'s and "0"'s. This same form of logic is what controls the "hardware" connected to our Z-80 MPU. But how are "1"'s and "0"'s transmitted along copper lines?

Just as 3 volts will power a flashlight & 110 volts would burn out the bulb, instantly, the signals to and from the computer have to be within certain voltage parameters. There are several families of logic which are separated mainly by differing voltage requirements for their signals. I won't attempt to discuss all of these, only to compare two of these families.

These two happen to be the most common: TTL (transistor/transistor logic) and C/MOS (complementary metal oxide).

C/MOS requires maximum 1.5 volts for logic "0" and minimum 3.5 volts for logic "1".

TTL requires 0.4 volts maximum for logic "0" and 2.4 volts minimum for logic "1". To make this easier, let's concern ourselves with just TTL and forget the rest for now.

TTL has specific voltage parameters that represent these logic levels "0" low and "1" high as shown by this chart:

| LOGIC LEVEL | MINIMUM | MAXIMUM V. |
|-------------|---------|------------|
| 0           | LOW     | 0.4 VOLTS  |
| 1           | HIGH    | 2.4 VOLTS  |

To put this into perspective, let's take an example from page 99 of your Bally Basic Manual. Look at #14, RD which is one of the contacts of our expansion bus. This is the read line and it is connected to the Z-80, various components inside the Astrocade and any extended memory you might have attached.

This line is used for various reasons and at various times during the execution of a program. One of which is "reading" memory. When data is requested from a memory location, this RD line swings from a high, "1", to an active low "0". This then becomes the necessary signal for the memory chips to pass the data along to the data bus. The data bus, by the way, are lines D0 thru D7 which hold the 8 bits that represent 0 to 255 decimal. (Send \$ASE for free conversion chart). The bar over the top of RD means that this signal is active low or that RD will only go low during a read operation. This is exactly how memory distinguishes a read from a write operation.

|    |                     |
|----|---------------------|
| RD | LOW DURING A READ   |
| RD | HIGH DURING A WRITE |

Next time, we will further discuss the expansion bus and, hopefully, understand it. For now, remember the two charts above. I'd appreciate questions or answers, projects or ideas from experts and novices alike.

Ed Horger

```

1 Y=((R-1)oS)bB-K;X=(RM+1)bB-1Z
2 CX=X;GOSUB 25;CY=YcKb2+Y;RETURN
3 BOX U,W,C,C,3;IF (X&U)+(Y&W)MU=J
4 RETURN
5 FOR M=0 TO ZbH;NEXT M;RETURN
6 R=A;GOSUB 1;GOSUB 5;RETURN
7 MU=7;L=L-1;GOTO 79
8 BOX X,Y,C,C,3;U=X;W=Y;RETURN
9 B=(Y+K)cBbS+(X+12)cB;RETURN
10 D=-1bD;GOTO 15
11 IF ABS(D)=1D=S;F=1;GOTO 15
12 D=1;F=S;GOTO 15
13 IF ABS(D)=1D=-S;F=1;GOTO 15
14 D=-1;F=S
15 B=E;GOTO 250
16 FOR R=1 TO H;IF @(R)GOSUB 1;C=7;GOSUB 8;MU=J;IF U>0IF PX(X,Y)=0Q=Q+5
17 NEXT R;RETURN
18 X=-4;Y=K;RETURN
19 CY=0;CX=-75;RETURN
20 R=B;GOSUB 1;GOSUB 5;IF A=B TU=43;GOTO 7
21 TU=L;GOTO 79
25 IF X=60CX=70
26 RETURN
30 IF @(B)GOSUB 6;TU=45;N=1
31 RETURN
40 CY=-32;INPUT " INPUT 1-4 PLYS: "P
41 IF (P<1)+(P>4)GOTO 40
48 T=P;U=-1;FOR N=5 TO 8;@(H+N)=0;NEXT N
50 CLEAR;PRINT " BALLY";PRINT " BLACK";PRINT " BOX",
52 O=0;Q=0;L=64;I=0;T=1;IF T>P T=1;I=4;U=U+1
54 FOR N=-32 TO 32STEP 8;LINE 0,N,4;LINE 64,N,1;LINE N+32,-32,4;LINE N+32,32,1;
NEXT N;PRINT #1,"*",T
56 BOX 32,0,67,67,3
60 FOR N=1 TO H+1;@(N)=0;MU=N;NEXT N;FOR N=1 TO 5
64 R=RD (R)BbS+RD (B)+1;IF @(R)GOTO 64
65 @(R)=1;NEXT N
68 IF U=0PRINT "PRINT " TEST";GOSUB 16
79 A(20)=0;GOSUB 18;GOTO 97
80 X=JX(T)bB+X;IF X<-4X=-4
82 IF X=J X=X
90 Y=JY(T)bB+Y;IF Y<-K Y=-K
92 IF Y=K Y=K
94 GOSUB 3
97 C=3;IF ABS(Y)<KIF X<JIF X>-4C=5
98 GOSUB 8;IF TR(T)GOTO 106
102 GOTO 80
106 IF C=5GOTO 500
107 IF ABS(Y)=KIF (X=-4)+(X=J)GOTO 80
110 Q=Q+1;L=L+1;IF L>90L=65
115 GOSUB 19;PRINT #1,"PROBES=",Q;&(20)=H;NT=H;MU=J;NT=2;GOSUB 9;A=B;GOSUB 2;TU
=L
130 D=S;F=1;IF Y=K D=-S
132 IF X=-4D=1;F=S
134 IF X=J D=-1;F=S
140 B=B+D;Z=18;N=0;GOSUB 30;IF NGOTO 7
150 IF @(B-F)+@(B+F)>0GOSUB 6;TU=43;GOTO 7
160 GOTO 210
200 E=B;B=B+D;G=BcS;IF (RM=0)+(RM=1)+(BcBS)+(B<12)GOTO 20
210 N=0;GOSUB 30;IF NGOTO 7
220 IF @(B-F)IF @(B+F)GOTO 5
230 IF @(B-F)GOTO 11
240 IF @(B+F)GOTO 13
250 Z=Z-2;IF Z=0Z=0
252 GOTO 200
500 MU=J;IF U=0T=4;GOTO 50
510 O=1-2bPX(X,Y)+0
515 BOX -46,-20,7,17,2;IF O=4GOSUB 19;CY=-16;PRINT "LAST";PRINT "GUESS
520 IF O<5GOTO 79
600 GOSUB 16;GOSUB 19;PRINT #1,"SCORE=",Q;@(H+T)=Q;@(H+T+4)=@(H+T+4)+Q
630 IF TR(T)GOTO 640
632 GOTO 630

```

This is a computerized version of a game produced by Parker Brothers. An article in Creative Computing (Feb., 1980) discussed the game for a PET program.

How the game is played: The black box is an 8x8 grid. At the beginning of each game, the computer locates 5 balls (i.e., obstacles), one in each of 5 randomly selected squares. The balls are invisible to the player.

The object of the game is to determine the locations of the 5 balls least amount of information possible.

The player obtains information about the location of the balls by sending a probe into the box at one of the 32 edge squares, and observing its behavior: it may emerge at another edge square, be reflected back to the square the probe entered, or be absorbed. Based on these observations and the rules for how probes move, the player can deduce the location of the 5 balls.

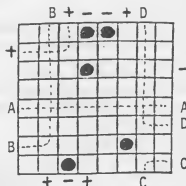
BLACK BOX

Steve Walters  
556 Langfield  
Northville, MI 48167

```

640 CLEAR :CY=32;IF T=PPRINT "END "
642 PRINT #2,"ROUND",U;FOR N=1 TO P;PRINT :
PRINT #1,"*",N," SCORE=",@(H+N),IF T
=PPRINT #1," AUG=",@(H+N+4)cU,
648 PRINT :NEXT N
650 IF TR(T)GOTO 50
652 GOTO 650

```



# BACKGAMMON

BY MIKE PEACE

YOU ARE THE SQUARES. THE COMPUTER IS THE X'S. THE OBJECT OF THE GAME IS TO MOVE ALL YOUR MEN CLOCKWISE TO OR PAST THE POINT ON TOP WHERE YOU HAVE 5 MEN (THE 4TH SPIKE FROM THE RIGHT), THEN TO BEAR THEM OFF THE BOARD BY THROWS OF THE DICE. A PLAYER CAN MOVE ONE MAN FOR THE TOTAL OF THE THROW, OR TWO MEN, ONE FOR EACH NUMBER ON THE DICE. DICE ARE SHOWN IN BOTTOM CENTER OF THE SCREEN. TO MOVE YOUR MEN TO THE RIGHT, OR TO MOVE CLOCKWISE OR RIGHT FOR COUNTERCLOCKWISE. WHEN YOU HAVE POSITIONED THE FLASHING BOX AT THE PIECE YOU WISH TO MOVE, PULL THE TRIGGER. YOU WILL NOW BE MOVING THAT PIECE TO THE NEW LOCATION DETERMINED BY THE DICE. PULL THE TRIGGER AGAIN TO COMPLETE THE MOVE. YOU MUST MOVE ALL OF YOUR MEN TO THE RIGHT OF THE SPIKE I PREVIOUSLY MENTIONED BEFORE YOU CAN TAKE THEM OFF THE BOARD. TO MOVE THEM OFF, SIMPLY USE THE MOVING METHOD TO GET THEM OFF THE UPPER RIGHT OF THE BOARD. THE COMPUTER WILL PLACE YOUR MEN AT THE LOWER LEFT AND ITS MEN AT THE LOWER RIGHT OF THE SCREEN. YOU GET TWO FULL MOVES FOR DOUBLES. AND YOU CAN BEND THE COMPUTER'S MAN BACK TO START IF YOU LAND ON HIS SINGLE MAN. YOU CANNOT LAND ON ANY SPIKE THAT IS OCCUPIED BY MORE THAN ONE OF YOUR OPPONENT'S MEN. THE COMPUTER FOLLOWS THE SAME RULES. IF YOU ARE BENT BACK TO THE START, YOU CANNOT MOVE ANOTHER MAN UNTIL THE ONE OFF THE BOARD IS RESTORED TO THE PLAYING FIELD. ANY WRONG MOVE IS PENALIZED BY LOSS OF PART OR ALL OF THAT TURN. IN BEARING OFF YOU MAY NOT USE THE LOSS OF BOTH DICE FOR ONE MOVE. IF YOU HAVE NEVER PLAYED BEFORE, WATCH THE COMPUTER'S MOVES TO LEARN MORE QUICKLY. GOOD LUCK!

MIKE PEACE

LOWERCASE = 1-BYTE KEYPAD WORDS. UNDERSCORES = SPACES. 1739 CHARACTERS

```

5  Nt=2j;clear ;H=500;Z=85;O=13;C=6;F=0;U=0;G=
25;goto 200
10  box X,Y,1,3,3;box X,Y,3,1,3
12  box X,Y,3,3,3;return
13  for O=0to 2;MU=O;next O
15  for D=0to 12;MU=Z+K;gosub P;next D;return

20  C=14;gosub 225;CY=1;CX=-30;NT=O;return
25  if W>0;W=0
26  if W<0;W=0
28  if W<13;X=84-W*13;Y=32+ABS((W-13)*4)-X*4
29  if W>12;X=-72+13*(W-13);Y=32-ABS((W-13)*4)+X*4
30
31  if W=0;Y=-40;X=(W-13)*3+66-F;MU=X
31  if W=25;Y=-40;X=(W-13)*3+66+U;MU=Y
34  return
35  for A=1to 24;if @A>0;return
36  next A;gosub 20;print "YBU_W0N!";A=KP;run

70  gosub G;P=11+N;gosub 15;@W)=@W)+L;W=Q
71  if @W)=L;P=11+L;gosub G;gosub O;@W)=@W)+@
(K)=@K)+L;P=W;W=Q;gosub G;gosub 11+L;MU=Z;W=
P
72  if Q=61;N=11+U+3;goto 75
73  if Q=61;N=-1;F=F+3;goto 75
74  @W)=@W)+N
75  gosub G;P=11+N;gosub 15;return
80  @Z6)=D+W;@Z7)=1+W;@Z8)=D+1+W
81  for S=26to 28;if @S)<1@S)=0;if A>7C=0
82  if @S)>24@S)=0;if A19@S)=W
84  next S;return
85  S=rnd (3)*6;I>2;I=(S+J)+(S=28)*8;goto Z
86  if S=28;@Z8)=@K;goto Z
87  return
89  P=C;gosub 80
100  for M=1to 5;gosub Z

```

```

120  if @S)<1@S)>C;J=S;Q=@S);T=+
1;if S=28;T=+1
140  if Q=2;return
160  C=P;next M;return
200  for A=-70to 76;step O;line A,-34,0;line A
+0,35,1;line A,35,0;line A+0,-34,1;next A
205  for A=-59to 72;step 26;for B=3to 1;step -
6;box A-0,-B,(B+3)*3,6,1;box A,B+2,(B+3)*3,6,
1;next B;next A
206  for A=0to 3;@A)=0;next A;@1)=2;@6)=-5
4;@8)=-3;@12)=5;@13)=-5;@17)=3;@19)=5;@2
4)=-2
287  for W=1to 3;@W)=0;@W)=0;A=12
287  for W=1to ABS@W);if @W)gosub G;gosub
A
210  next V;next W;V=1;CX=-G;print "BACKGAMMO
N
225  box 0,1,160,C,2;if C=14;return
300  D=rnd (6);I=rnd (6);CY=-39;CX=-14;print
"2,D," ",I;box 0,-39,27,8,3;box 0,-39,7,8,3;T
=2;if D=1;T=0
330  N=+1;J=G;if N>0;N=-1;goto 600
400  K=G;Q=-2;N=0;L=-1
410  gosub 35;gosub H;if Q=-2;goto 410
415  if @0)if Q=0;for M=0to 3;MU=69;next M;go
to 400
420  gosub 12;gosub H;if N=1;goto 410
430  P=W;W=Q;gosub 80
435  for M=0to 15;gosub Z;if P=@S);J=S;Q=P;go
to 450
440  MU=48+M;next M
450  gosub 3;gosub 12;gosub 70;T=T+1;if S=28
T=T+1
460  if T>3;goto 380
470  goto 480
500  W=W-D*(1);gosub G;gosub 12;gosub 12;if T
R(1);gosub 55@MU=72;return
510  goto H
550  if Q=-2;@W)=0;W=return
560  if Q=-2;@W)=0;W=-2;N=1;return
570  N=0;return
600  D=D-1;N=-1;L=K=0
610  R=1;for A=0to 1;step N;if @A)<0;goto 616
615  next A;gosub 20;print "COMPUTER_W0N!";if
KPrun
616  E=2;if @S)<0;R=A
630  for W=0to R;step N;B=@W);Q=-2;if B>0;goto
636
632  if E=0;C=-2;gosub 99
634  if E=2;C=-G;gosub 99
635  if Q=-2;goto 660
636  if E<0;goto 380
600  next W;E=W-E-2;goto 630
660  gosub 70;if T>3;goto 380
670  goto 610

```

**GAMBITS**  
presents  
**"BOING"**  
Starring in  
**SPRING THING Part I**

Imagine controlling a coil spring inside of a building located in deep space. There is no gravity or friction to slow it down! Now imagine that you must avoid being hit by a battery of laser canons that keep shooting faster the longer you stay alive, and try to pick up valuable gold rings!

This is how this fast paced game is played! "Turning it over" (12,500 points) will start your game over with the number of SPRINGs you have left plus one, which, by then, will be a welcome relief!!

Options include:

1 to 4 Players

Individual selection of laser firing speeds

Individual selection of the number of SPRING THINGS

Individual selection of hand controls

Continuous play or Stop after each SPRING

This game can be played on ANY BLUE RAM BASIC!

The cost is only \$6.95 (U.S.)!

Send check or money order to:

KEN LILL

6608 S. CAMPBELL

CHICAGO, ILLINOIS 60629

Please allow 2 to 4 weeks for delivery

**SPECIAL OFFER!!**

Buy your *SPRING THING Part I* tape before January 31, 1985 and "Turn - it - over" and you will receive either a \$1.00 refund OR \$1.50 credit towards the purchase of either a *SPRING THING Part II* or *ARCADE GOLF* tape! Sorry. offer available only once per tape! (Part II available in 1985)

## "REPACK" [UTILITY]

[FOR AB + 8K ADDED MEMORY]

```

5 CLEAR ;CY=10;CX=-21;PRINT "ZEROING";CX=-9;PRINT "RAM";CX=-18;PRINT "PLEASE"
;CX=-12;PRINT "WAIT
10 A=24576;B=32767;C=-A;D=-22772;E=19998;F=20358;G=16384;FOR N=ATO BSTEP 2;%(N
)=0;NEXT N;CLEAR ;PRINT " READY";PRINT " AWAITING INPUT
15 PRINT " 0F TEXT
20 :INPUT %(A);PRINT " IN BLUE RAM
30 H=28600;I=30500;K=31000;M=K;J=30858;L=%(20000);FOR N=CTO LSTEP 2;%(M)=%(N);
M=M+2;NEXT N;PRINT " UNPACKING TEXT
40 P=8192;R=2308;FOR N=GTO ESTEP 2;%(N)=%(N+P);NEXT N;M=H;FOR N=CTO DSTEP 2;%(
M)=%(N);M=M+2;NEXT N;M=K;FOR N=CTO LSTEP 2;%(N)=%(M);M=M+2;NEXT N
50 CLEAR ;PRINT " TEXT UNPACKED";FOR N=ITO JSTEP 2;%(N)=%(N-R);NEXT N;PRINT
" READY TO LOAD PICTURE
60 :INPUT %(A);PRINT " IN BLUE RAM
70 FOR N=0TO R;NEXT N;M=K;PRINT " REPACKING TEXT
80 FOR N=GTO ESTEP 2;%(N)=%(N+P);NEXT N;FOR N=CTO LSTEP 2;%(N)=%(M);M=M+2;NEXT
N;M=H
90 FOR N=CTO DSTEP 2;%(N)=%(M);M=M+2;NEXT N;FOR N=GTO ESTEP 2;%(N+P)=%(N);NEXT
N;M=K;FOR N=CTO LSTEP 2;%(N)=%(M);M=M+2;NEXT N
100 CLEAR ;PRINT " TEXT REPACKED";FOR N=ITO JSTEP 2;%(N-R)=%(N);NEXT N;M=0;FO
R N=28346TO 28550STEP 2;IF %(N)M=(N-28344)C2
110 NEXT N;N=M+21b(M#0);PRINT " DO YOU WANT";PRINT " FILE SEARCH?";PRINT " 1=Y
ES 2=N0
120 O=KP-50;IF OINPUT " FILE SEARCH N0.?Y
130 IF (O<-1)+(O>0)GOTO 120
140 PRINT " PRESS ANY KEY FOR";PRINT " :PRINT
150 IF KPIF 0:PRINT Y,1
160 :PRINT %(A),1864+N;PRINT " :LIST ";:LIST ;IF 0:LIST
170 PRINT ;PRINT " TO RERUN UTILITY PRESS";PRINT " (G0)
180 IF KP=13RUN
ENTER>PRINT " ;RUN " ;:PRINT %(16384),1887 [GET TAPE MOVING AND PRESS GO]

```

## TO USE "REPACK":

- >1. KEY IN UTILITY AND PUT ON PERMANENT STORAGE TAPE
- >2. KEY IN PROGRAM TEXT, VARIABLES, STRINGS, AND MACHINE CODE IN STACK AREA
- >3. TAPE ALL AT ONCE!!  
NOTE: YOUR LIMITS ARE FROM SIMPLE ;PRINT ,OR RATHER:  
FROM ;PRINT %(16384),1864 TO ;PRINT %(16384),1987 [HALF THE STACK]
- >4. PRESS [RESET] AND KEY IN PICTURE PROGRAM OR LOAD AB SCRIBLING
- >5. TAPE PICTURE PROGRAM OR SCRIBBLING BEHIND TEXT WITH PICTURE SHOWING  
NOTE: TRY PUTTING: IF &(23);PRINT INTO SCRIBBLING SOMEWHERE  
AND HIT LEFT KEY COLUMN TO DUMP [IF SCRIBBLING WAS USED]
- >6. LOAD "REPACK"
- >7. LOAD TEXT AT "AWAITING INPUT OF TEXT"
- >8. LOAD PICTURE AT "READY TO LOAD PICTURE"
- >9. CHOOSE FILE SEARCH, [TO FOLLOW VOL.5 PG.125 ARCADIAN "FILE SEARCHER"]
- >10. DUMP FINISHED PROGRAM TO TAPE
- >11. PLAY FINISHED TAPE BACK IN TO VERIFY

Oct 31, 1984



Vol 6 No 11/12

## "REPACK" [UTILITY]

[FOR AB NO ADDED MEMORY]

[USE FOLLOWING PROCEDURE]

- >1. KEY IN PROGRAM TEXT, VARIABLES, STRINGS, AND MACHINE CODE IN STACK AREA
- >2. AFTER DEBUGGING, TAPE MACHINE CODE WITH :PRINT %(<20237),60 [OR WHATEVER]
- >3. RUN 30 SEC. OF BLANK TAPE THROUGH AND TAPE THE TEXT AND VARIABLES THERE  
NOTE: USE :PRINT %(<-24576),904;:PRINT %(<20000),57
- >4. REWIND TAPE, ENTER :LIST , AND PLAY TAPE STOPPING WHEN CURSOR RETURNS
- >5. PRESS [RESET] AND KEY IN PICTURE PROGRAM OR LOAD AB SCRIBBLING  
NOTE: REMOVE WORK TAPE TO USE SCRIBBLING BUT DON'T REWIND
- >6. TAPE PICTURE PROGRAM OR SCRIBBLING BEFORE TEXT WITH PICTURE SHOWING
- >7. REWIND TAPE AND PRESS [RESET]
- >8. RELOAD MACHINE CODE WITH :INPUT %(<20237) [OR WHATEVER] AND STOP TAPE
- >9. ENTER THIS LINE, PRESS [G0] AND PLAY THE TAPE

PRINT " :RUN " ; :INPUT ; :INPUT %(<-24576) ; :INPUT %(<20000) ; IF KP:PRINT %(<16384),1987  
[OR WHATEVER]

- >10. GET OUT YOUR FINISH TAPE, START IT RECORDING AN HIT A KEY
- >11. USE :LIST TO VERIFY

[QUESTIONS????] WRITE TO :

MICHAEL D. WHITE  
4585 COUNTY LINE #2  
R.D.#1 BOX 373  
WAKEMAN, OHIO 44889

## "REPACK" PICTURE CONTEST RULES

AS YOU HAVE SEEN, THERE IS NO PICTURE FOR "REPACK"

SIMPLY SEND IN A TITLE PICTURE FOR THE UTILITY, ON A CASSETTE TAPE OR A LISTING THAT DRAWS YOUR PICTURE

ALL CONTESTANTS RECIEVE A COUPON TOWARDS A QUADRA PURCHASE

THE BEST JUDGED PICTURE RECIEVES QUADRA FREE!!!

PRESENT OWNERS OF QUADRA ARE NOT ELIGIBLE FOR AN OBVIOUS REASON  
[YOU ALREADY HAVE THE PRIZE]



## METROPOLITAN ATTACK!

LOWERCASE = 1-BYTE KEYPAD WORDS. UNDERSCORES  
= SPACES. 1535 CHARACTERS

```

2 NT=0;clear ;print ;input "BASES?"$
5 BC=0;D=10;T=2;@ (1)=25;@ (2)=25;@ (3)=25;V=49
9;M=0;Q=4;W=200;FC=14;gosub 2000
10 clear ;FC=14;box 0,-42,160,3,3
20 box 0,-40,10,7,1
30 X=10451;Y=10240;Z=10285
35 B=-40;C=40;D=0;E=C;F=C;G=F
40 for A=30to 70step 35;box A,-38-rnd (3),9,
5,1;box -A,-38-rnd (3),9,5,1;next A
50 for A=-4to 4step 3;box A,-38,1,1,2;next A
60 C=C-T-rnd (3);E=E-T-rnd (3);G=G-T-rnd (3)
11 B=B-rnd (7)-4;D=D-rnd (7)-3;F=F-rnd (7)-3
61 if Q=21f M>W,T=1+1;W=M+200;goto 70
62 if M>W,Q=0-1;W=M+200
65 if M>V,gosub 1000
67 if @ (1)<5f @ (2)<5f @ (3)<5BC=1
70 XY=X;line B,C,3;XY=X;Y=Y;line D,E,3;Y=XY
;XY=Z;line F,G,3;Z=XY
71 NT=0;CY=42;CX=-30;print @0,M;NT=1
75 if (CX-37)+(EC-38)+(G-37)goto 200
80 for A=1to Q;gosub 100;next A;goto 60
100 J=KN(1)+85+2
102 VA=2;VB=2;VC=2;TA=166;TB=TA;TC=99;VR=13;
VF=2
105 H=M+JX(1)*(X+T);I=I+JY(1)*(X+T);if I>351
=35
106 if I<38I=-30
107 CX=H;CY=I;print "+";K=0;CX=H;CY=I;print
" "
108 if TR(1)#!return
109 if @ (J)=0MU="4";return
110 if J=1R=-10049
111 if J=2R=-10240
112 if J=3R=-10175
115 @ (J)=@ (J)-1;VC=5;TA=53;NM=2;VR=63;VF=3;M
D=-1;TC=29;VA=5;VB=6;if @ (1)=0if @ (2)=0if @ (3)
=0goto 1600
116 for K=1to 2;XY=R;line H,I,3;next K
120 if H>B-Qif H<B-Qif I<Cif I>C-Obox -52,6,
50,75,2;X=10451;B=-40;C=40;NV=-1;M=M+20
130 if H>D-Qif H<D-Qif I<Eif I>E-O_M=M+20;bo
x 0,6,53,75,2;Y=10240;NV=-1;D=0;E=40
140 if H>F-Qif H<F-Qif I<Gif I>G-O_NV=-1;M=M
+20;box 52,6,53,75,2;Z=10285;F=40;G=F
150 NV=0;return
200 for A=1to 30;BC=89;MU=44;BC=0;MU=95;next
A;B=S-1;if S=0goto 600
210 gosub 2000;goto 10
600 v;for A=50to 10;FC=89;box 0,-38,160,10,
3;FC=14;MU=0;next A;STOP
1000 NT=0;CY=30;print " ____BONUS_BASE";print
" ____FUEL_BONUS";print
1001 NT=1;for A=1to 100step 3;MU=A;next A;fo
r A=1to @ (1)+@ (2)+@ (3);print " ";M=M+5;next
A;CX=-30;CY=40;print @0,M;for A=1to 3;@ (A)=25
;next A
1002 for A=1to 1200;next A
1003 BC=0;if O<200=0+1
1010 V=V+500;S=S+1;gosub 2000;goto 10
1600 CY=10;print " ____OUT_OF_ENERGY!";goto 600
2000 v;clear ;CY=0;CX=0;print @0,S;for A=1to
40;box 0,0,30,30,3;next A;return

```

CONNECT FOUR ENLARGED  
ADAPTED FROM ROBERT LEAKE'S PROGRAM  
WHICH APPEARED IN LAST MONTH'S ARCADIAN.  
USE REM LINES 1 - 7 FROM LAST MONTH  
AND RETYPE THE PROGRAM FROM LINE 8 THRU THE  
END. THIS VERSION FILLS THE WHOLE SCREEN!

ADAPTED BY H.L. HANSON

LOWERCASE = 1-BYTE KEYPAD WORDS. UNDERSCORES  
= SPACES. 1104 CHARACTERS

```

8 BC=0;FC=110;goto 14
9 box 0,41,117,2,2
10 box -72+18xC,41,9,2;return
11 M=X(-24225+14x+2xC);return
12 U=W+7;F=RM;if F=0F=7
13 box -72+18xF,-37+(0-1)+7x13,17,12,3;retur
n
14 clear ;input " _1_OR_2_PLAYERS?"P
15 for A=1to 76;@ (A)=0;next A;clear ;box 0,-
5,127,79,1;for D=1to 42;gosub 12;next Q;C=1g
osub 10;T=-1;N=61
16 J=(T+3)+2
17 D=C+JX(J);if D#Dif D<(B-D)C=D;gosub 9
18 if TR(1)#!+*(C)#!goto 17
19 gosub 37;T=-T;if P#1goto 16
20 L=-9999;for C=1to 7;gosub 9;if *(C)=6goto
36
21 E=*(C);gosub 11;W=0;for A=M+1to A+X(M)+25
6;B=X(A)+256-24;S=*(B)
22 W=M+*(B+8);next A;if W>*(83)K=C;C=7;got
o 36
23 if *(C)=5goto 35
24 if W>*(77)goto 35
25 E=E+1;gosub 11;B=0;H=1;for A=M+1to A+X(M)
+256;B=X(A)+256-24;S=*(B)
26 if B=-30=1
27 if S=-24W=-2*(78)+3
28 if S=24W=-*(82)+3
29 if S=3H=B=-3333
30 next A;if Q=W=-6666;goto 35
31 if H+*(C)=4;goto 35
32 E=E+1;gosub 11;I=0;for A=M+1to A+X(M)+256
;B=X(A)+256-24;S=*(B)
33 if S=3I=1
34 next A;if I_K=C;C=7;goto 36
35 if W<L=L=I_K=C
36 next C;C=K;gosub 37;T=-1;goto 17
37 E=*(C);gosub 11;*(C)=*(C)+1;X=-72+18xC;Y=
-50+13x*(C);gosub 9;box X,Y,13,10,1;box X,Y,7
,6,(7+T)+2;MU=84
38 for A=M+1to A+X(M)+256;B=X(A)+256-24;S=*(
B);if S=4goto 46
39 if SxTC@ (B)=4;N=N-1;goto 46
40 S=S+T;*(B)=S;if S#4xTgoto 46
41 R=1;Z=X(-24144+8)+256-31;if B>31R=6
42 if B>43R=7
43 if B>64R=8
44 N=0;for Q=2to 2+3xRstep R;gosub 12;gosub
13;MU=87+N;next Q;if TR(J)run
45 goto 44
46 next A;if Nreturn *(77)=1200
47 CX=-20;print "TIE_GAME",
48 if TR(1)run *(78)=100
49 goto 48 *(79)=8
*(80)=1
*(81)=12
*(82)=150
*(83)=8000
*(84)=0

```

# Official ASTROCADE SCOREBOARD

| GAME                | SKILL | LIVES | SCORE    | NAME           |
|---------------------|-------|-------|----------|----------------|
| MUNCHER             |       |       | 90,500   | Joe Adams      |
| COSMIC RAIDERS      | 1     | 3     |          |                |
| COSMIC RAIDERS      | 9     | 3     | 11,150   | George Moses   |
| SOLAR CONQUEROR     | 1     | 3     | *89,588  | Chuck Hirsch   |
| SOLAR CONQUEROR     | 9     | 3     | *136,742 | Thomas Wenzel  |
| THE WIZARD          | 1     |       | 453,200  | Stan Kendall   |
| THE WIZARD          | 3     |       |          |                |
| BALLY PIN I         |       |       | 320,430  | Don Gladden    |
| BALLY PIN II        |       |       | 340,640  | Rick Mattice   |
| PIRATES CHASE       | 1     | 3     |          |                |
| PIRATES CHASE       | 9     | 3     | 705,284  | Peggy Gladden  |
| GALACTIC INVASION   | 1     | 3     |          |                |
| GALACTIC INVASION   | 9     | 3     |          |                |
| SPACE FORTRESS      | 1     | 3     |          |                |
| SPACE FORTRESS      | 9     | 3     | *10,300  | Noreen Haisman |
| BRICKYARD           | 1     | 6     | 1,875    | Kelly Prosise  |
| BRICKYARD           | 4     | 6     |          |                |
| MS. CANDYMAN        | 1     |       | 265,122  | Craig Conner   |
| MS. CANDYMAN        | 3     |       | 61,578   | Craig Conner   |
| ASTRO BATTLE        | 1     |       | *13,620  | Noreen Haisman |
| ASTRO BATTLE        | 4     |       |          |                |
| SEA DEVIL           |       |       | 177,850  | Eric Allen     |
| SNEAKY SNAKE        |       |       | 56,457   | Joe Adams      |
| TREASURE COVE       | ?     | ?     | 32,817   | David Krec     |
| COLLISION COURSE    |       |       |          |                |
| EXITOR'S REVENGE    |       |       | 31,575   | Fred Olivas    |
| DUNGEONS OF DRACULA |       |       | 3,440    | Al Showalter   |
| FLYING ACE          |       | 6     |          |                |
| PACK RAT II **      |       |       |          |                |
|                     |       |       |          |                |
|                     |       |       |          |                |

\*\*New version only

\*Indicates new high score

THIS SERIES OF ARTICLES IS TO ADD SOME KNOWLEDGE TO READERS THAT MAY BE IN THE DARK ABOUT SOME OF THE BASIC NO-NO'S OF PROGRAMMING!

## PROGRAMMING FOR SPEED!

THERE ARE SEVERAL BASIC THINGS THAT YOU MUST TRY TO DO, IN ORDER TO KEEP YOUR MOVING OBJECT GOING AT IT'S FASTEST POSSIBLE SPEED. ONE IS TO MAKE THE PORTION OF THE PROGRAM THAT DOES ALL OF YOUR MOTION AND CHECKING DOWN TO THE MINIMUM NUMBER OF BYTES! NEXT IS TO KEEP YOUR 'IF' STATEMENTS AT A MINIMUM IN THIS AREA. KEEP YOUR 'IF' STATEMENTS AS SHORT AS POSSIBLE. ONE OTHER THING TO TRY TO DO IS TO USE BOOLEAN ALGEBRA (TRUE/FALSE) STATEMENTS AS MUCH AS YOU CAN, PROVIDING THEY ARE NOT A LOT LONGER THAN A SHORT 'IF'! LET'S TRY TO WRITE A PROGRAM THAT WILL DO JUST WHAT WE WANT IT TO DO AS FAR AS SPEED.

```
10 IF Z=0GOTO 100
20 X=X+JX(1)B3;Y=Y+JY(1)B3;IF V=XIF Y=WURUN
30 BOX V,W,5,5,3;BOX X,Y,5,5,3;V=X;W=Y;IF
ABS(Y-E)<4IF ABS(X-D)<4GOTO 50
40 RUN
50 GOSUB 80;CX=-15;CY=0;PRINT "HIT!";FOR A=
0TO 999;NEXT A;BOX 0,0,35,11,2;GOSUB 80
60 D=RD(150)-75;E=RD(80)-40;IF ABS(D)<
18IF ABS(E)<6GOTO 60
70 BOX F,G,3,3,3;BOX D,E,3,3,3;F=D;G=E;RUN
80 BC=90-(BC*9)/881;RETURN
100 CLEAR;FC=132;W=200;F=W;Z=W;GOSUB 80;GOTO
60
```

NOW LET'S ANALYZE THIS PROGRAM. LINE # 10 CHECKS Z. IF IT IS 0 THEN IT WILL JUMP TO LINE 100 WHERE WE CLEAR AND WE SET THE FC TO YELLOW COLOR. NEXT WE SET W AND F TO 200 SO THAT WHEN WE GO TO THE BOX MAKING LINES THE FIRST BOX OF EACH TYPE IS MADE OFF OF THE SCREEN. THIS IS IMPORTANT ALSO, TO REDUCE THE AMOUNT OF FLICKER. NEXT IS TO SET Z TO A NUMBER. ANY NUMBER BETWEEN -32767 AND 32767 WILL DO, AS LONG AS IT IS NOT 0! THE REASON THAT WE DO THIS IS TO LET US SAVE BYTES LATER BY SAYING 'RUN' INSTEAD OF GOTO 20! NOW WE GO TO SUBROUTINE #80. THIS IS WHAT I SAID BEFORE - BOOLEAN ALGEBRA! THIS LINE IS SHORTER THAN THE 2 STATEMENTS-

```
80 IF BC=90C=90;RETURN
90 BC=9;RETURN
```

IT IS ONLY SHORTER BY 4 BYTES, BUT AS WE WELL KNOW, 4 BYTES CAN GIVE US THAT LITTLE ROOM WE NEED LATER! NOW WE JUMP TO LINE 60. HERE WE SET D & E TO RANDOM NUMBERS. IF THEY HAPPEN TO BE IN THE CENTER, WE KEEP GOING BACK AND RESETTING THEM UNTIL THEY'RE NOT! NEXT WE MAKE OUR SMALL BOX AT F & G. THIS WILL BE USED LATER IN THE PROGRAM AS OUR LAST LOCATION OF THIS BOX. THIS IS SO WE CAN ERASE IT. THIS IS WHY WE MADE THE FIRST BOX OUTSIDE OF THE SCREEN LIMITS. FINALLY WE ARE PUTTING OUR FIRST BOX ON THE SCREEN, AT D&E. NOW WE SET F & G TO THIS SPOT SO THAT IT KNOWS WHERE TO ERASE. FINALLY WE GO TO THE

MAIN PART OF OUR PROGRAM. LINE 20 CHANGES X & Y SO THAT OUR BIG BOX CAN MOVE. THEN WE CHECK V & W AGAINST X & Y. IF WE HAVEN'T MOVED THE JOYSTICK, WE WON'T MAKE ANY NEW BOXES AND THERE WON'T BE ANY FLICKER. THE RUN THEN SEES THAT Z ≠ 0, SO IT PASSES IT BY AND GOES THRU OUR HAND CONTROL CHECK ONCE MORE. LINE 30 ACTS LIKE 70 EXCEPT THAT AT THE END IT CHECKS TO SEE IF WE ARE TOUCHING OUR TARGET BOX. THIS TYPE OF STATEMENT IS MUCH FASTER THEN PX() STATEMENTS, HOWEVER, THERE ARE TIMES WHEN THIS CANNOT BE USED IN THEIR PLACE. IN WHICH CASE, TRY TO CHECK ONLY WHAT IS ABSOLUTELY NECESSARY! THE MORE CHECKS YOU PUT INTO THE LINES FROM 20 TO 40, THE SLOWER THE MOTION OF YOUR MOVING OBJECT! IF THE EITHER OF THE IF STATEMENTS ARE NOT TRUE, THEN THE RUN IS SEEN IN LINE 40. IF THEY ARE BOTH TRUE, IT MEANS THAT YOU 'HIT' YOUR TARGET AND THEN IT EXECUTES LINES 50 TO 70! THESE SHOULD BE EASY ENOUGH TO UNDERSTAND. IF YOU WANT TO ADD ANY SOUND TO BE PLAYING DURING THE TIME THAT YOU ARE MOVING AROUND, TRY TO KEEP IT SHORT AND SIMPLE. A GOOD WAY TO DO THIS IS TO ONLY CHANGE 1 NOTE DURING THIS TIME. SET UP YOUR VOLUMES AND ALL OTHER PARTS OF YOUR MOTION SOUND(S) OUTSIDE OF LINES 20 - 40, SAY IN 70 BEFORE THE GOTO STATEMENT. IF YOU WANT TO ADD ANY KIND OF SCORING, THAT SHOULD ALSO BE INCLUDED SOMEWHERE BETWEEN LINES 50 & 70. I DON'T THINK THAT ANYONE WILL COMPLAIN THAT IT TAKES TOO LONG FOR THEIR SCORE TO APPEAR. WHAT EVERYONE REALLY WANTS IS FOR THEIR MAN TO MOVE AS FAST AS POSSIBLE. ONE FINAL HINT AS TO WHERE TO PUT YOUR MAIN MOTION PART OF YOUR PROGRAM - **NEAR THE TOP!**

THE ONLY THINGS THAT SHOULD BE KEPT BEFORE IT ARE ANY SUBROUTINES THAT MAY BE NEEDED TO DO CHECKS, ADD MUSIC, OR MOVE YOUR PIECE(S) AROUND. ANYTHING ELSE SHOULD COME AFTER!!

THE WAY THAT YOU WOULD SAVE A PROGRAM LIKE THIS IS TO SET Z TO 0 PRIOR TO YOUR PRINT. IF YOU DON'T, YOU WILL HAVE TO SAY INPUT 1;GOTO 100 'GO' TO MAKE IT START OUT RIGHT!!

I HOPE THAT WHAT I'VE DISCUSSED IN THIS ARTICLE WILL HELP YOU IN YOUR FUTURE PROGRAMMING!

FOREVER PROGRAMMING,  
KEN LILL  
6608 S. CAMPBELL  
CHICAGO, ILLINOIS 60629

LOWERCASE = 1-BYTE KEYPAD WORDS, UNDERSCORES  
= SPACES. 1621 CHARACTERS

```

1 .THE_GAME_OF_WAR
2 .BY_EDWARD_MAHONEY
3 .JUNE_2_1984
4 c=0;BC=10;FC=190;%(9)=87;%(0)=43;%(1)=
43;%(2)=126;%(3)=126;gosub 15;goto S#5
15 CY=0;CX=-27;print "SHUFFLING";for I=1 to 3
00
16 A=rnd(52);B=rnd(52);%(0)=A;%(1)=B
17 %(B)=%(0);next I;return
20 C=(Ex2)+T;return
30 B=(Fx2)+T;return
40 B=(E)+0;0*(F)+0;return
50 I=(I)+0;return
61 TV=74;return
62 TV=81;return
63 TV=75;return
64 TV=65;return
70 if (M-U)+1+(N-U-1) goto S
75 return
80 L=53;for CY=24 to -8 step -8;for CX=-70 to 7
0 step 132;TV=(L);next CX;L=L+1;next CY
90 CX=-65;CY=35;gosub 92;CX=20;gosub 92;retu
rn
92 print "CARD #";return
100 L=50;H=-50;B=M-40;J=N-40;Y=B
110 for W=1 to 2;box H,-10,22,62;
120 for A=-42 to Y step 2;box H,A,22,1,1
130 next A;H=L;Y=J;next W
200 for A=-60 to -38
210 box -H,B,22,1;1;box -H,B,22,1,2
220 box A,B,3,1,2;box A+18,B,3,1,1
230 box L,J,22,1,1;box L,J,22,1,2
240 box -A,J,3,1,2;box -A-18,J,3,1,1
250 next A;X=-28;L=-37;H=-12
260 for W=1 to 2;for Y=B to L step H
270 box X,Y,20,1,3;box X,Y,20,1,3
280 box X,B,20,2,2;next Y;L=20;H=2;B=J;X=28;
next W

```

## VIDEO : VIDEO

LOWERCASE = 1-BYTE KEYPAD WORDS, UNDERSCORES  
= SPACES. 1005 CHARACTERS

```

1 .__VIDEO___.VIDEO___.1
2 .FRED_RONEVEY_1984_-2_
3 NT=0;clear i;(9)=-10;for N=130 to -130 step
-10;BC=246;FC=0;gosub 4;BC=0;FC=7;gosub 5;got
o 6
4 L=ABS(N);Z=5-3*(N/0);for X=-L+2 to L step Z;
line 0,0,4;line X,ABS(X)-L,3;line 0,0,4;line
-X,L-ABS(X),3;next X
5 for Q=0 to 3*(ABS(N)-1);next Q;return
6 BC=7;FC=0;gosub 5;%(0)=7;%(1)=7;%(2)=0;%(3)
=0;BC=0;FC=7;%(9)=84;gosub 5;box -40,22,80,4
4,3;box 40,-22,80,44,3;gosub 5;FC=0
7 BC=246;%(0)=55;%(1)=55;gosub 5;FC=67;%(2)=
235;%(3)=235;gosub 5;BC=0;%(2)=0;%(3)=0;box -
40,22,80,44,3;box 40,-22,80,44,3
8 gosub 5;%(9)=-10;BC=55;gosub 4;if N<0 goto
12

```

```

290 box X,-31,20,2,2;box 20,J,39,2,2
300 box 0,-30,17,20,1;box 0,30,13,18,2
310 box 0,30,17,20,1;box 0,30,13,18,2
320 X=-2;return
400 box 0,-30,17,20,3;box 0,-30,17,20,1
410 box 0,30,17,20,3;box 0,30,17,20,1;return
420 box 0,0,70,24,2;return
500 for Z=0 to P step 2;if X(Z)=87*(Z)=L
520 next Z;U=0;return
800 CX=-27;CY=35;print #2,E;CX=58;print #2,
F;
810 CX=X;CY=Y+4;if I#10;box X+4,CY,8,B,2
820 if I#10;gosub 15;goto 840
830 print #0,I;
840 CX=X+6;CY=Y-5;TV=RH;return
1000 U=0;M=26;N=26;E=rnd(52);F=rnd(52);gos
ub 80;gosub 20;gosub 30;gosub 0
1040 gosub 70;if E>52;E=1;gosub 20
1050 if X(C)877E=E+1;gosub 20;goto V
1060 if F>52F=1;gosub 30
1070 if X(D)89F=F+1;gosub 30;goto 1060
1080 I=E;gosub 50;Y=-30;gosub R;I=F;gosub 50
;Y=30;gosub R
1100 gosub 40;if B=0,CX=-20;CY=8;print "'WA
R";U=U+1;gosub 70;X(C)=87;X(D)=87;goto 2040
2000 CX=-20;CY=8;B=1;0;print "<_I_WIN';M=M+
U+1;N=N-U-1;L=77;X(D)=L;if Ugosub 500
2010 if B<0;print "YOU_WIN";N=N+U+1;M=M-U-1
;L=89;X(C)=L;if Ugosub 500
2030 CX=-71;CY=24;print #2,H;CX=68;print #
2,N;CX=68;print "#";CX=67;print "#";
2040 E=E+1;F=F+1;gosub 20;gosub 30;for Z=1 to
V;next Z
2050 gosub 400;gosub 420;gosub 0;goto V
5000 for I=1 to 10;gosub 420;CX=-27;CY=0;print
t "GAME_OVER";
5010 for Z=1 to V;next Z;next I

```

```

9 if N=0 for L=3 to 156 step 4;BC=rnd(243);FC=
BC+12;box 0,0,L,2,3;next L;clear i;next N
10 line 0,0,4;BC=127;for C=1 to 3 step 2;for X
=-L+2 to L+2 step C+2;1;line X,ABS(X)-38,C;line
0,0,C
11 line -X,38-ABS(X),C;line 0,0,C;next X;gos
ub 5;next C;for L=0 to 5;box 0,0,137,77,3;gosu
b 5;next L;gosub 5;clear i;next N
12 line 0,0,4;BC=127;for X=-L+2 to L+2;line X
,ABS(X)-26,1+(X>0);line 0,0,1;line -X,26-ABS(
X),1+(X>0);line 0,0,1;next X;gosub 5;for L=0 t
o 9
13 box 0,0,L+2+X+2,66,3;gosub 5;next L;gosub
5;clear i;next N;BC=55;N=-230;gosub 4;BC=0;FC
=246;gosub 5;gosub 4
14 print i;for L=0 to 2;BC=rnd(243);FC=BC+12;
list 2;next L;BC=0;FC=7;for L=0 to 44;box 0,4
,160,19,3;next L;N=333;gosub 5;run
15 for X=-130 to 130;line 0,0,1;line X,ABS(X)
-130,4;line 0,0,1;line -X,130-ABS(X),4;next X
;box 0,0,160,35,2;CY=4;list 2;box 0,0,156,31
,3;print

```

# ARCADIAN

Vol 6 No 11/12  
Oct 31, 1984

```

5 X=0;Y=0
10 BOX 0,0,170,120,4;GOSUB 40;GOSUB 50
20 NT=0;CLEAR ;GOTO 110
25 CY=24;PRINT " PULL TRIGGER WHEN READY";IF TR(1)RETURN
26 GOTO 25
30 X=X+JX(1);Y=Y+JY(1);RETURN
40 SN,0,0,170,110,@(1);RETURN
50 SH,0,0,0,@(1);RETURN
60 M=0;PRINT " MODE?";RETURN
70 B=B+JY(1);IF JX(1)=-1B=B-10
80 IF JX(1)=1B=B+10
90 RETURN
100 FOR A=1TO 900;NEXT A;RETURN
110 FC=193;FB=71;FA=108;CT=50;CF=SM,1;CLEAR ;GOSUB 50;PRINT " (1) CIRCLE";PRINT
    " (2) BOX ";PRINT " (3) LINE ";PRINT " (4) ALPHABET
120 S=0;PRINT "SELECT:";
130 S=S+JY(1);IF S>4S=4
140 CY=25;CX=-40;PRINT #1,S,#1," ";IF TR(1)GOTO 160
150 GOTO 130
160 IF S=4GOTO 570
165 IF S#ABS(S)GOTO 2000
170 IF S=2GOTO 300
180 IF S=3GOTO 470
190 GOSUB 60;GOSUB 100
200 M=M+JY(1);IF M>7M=7
210 CY=20;CX=-43;PRINT #1,M,#1," ";IF TR(1)GOTO 230
220 GOTO 200
230 GOSUB 30;GOSUB 50;R=KN(1);IF R<1R=1
240 CI,X,Y,R,M
250 IF TR(1)GOSUB 100;GOTO 270
260 GOTO 230
270 IF JY(1)GOTO 110
280 IF TR(1)GOSUB 40;GOTO 110
290 GOTO 270
300 PRINT " SIZE:
310 B=0;PRINT " WIDTH?
320 GOSUB 70;W=B;CX=-44;CY=13;PRINT #1,W,#1," ";IF TR(1)GOSUB 100;GOTO 340
330 GOTO 320
340 B=0;PRINT " HEIGHT?
350 GOSUB 70;H=B;CX=-44;CY=7;PRINT #1,H,#1," ";IF TR(1)GOTO 370
360 GOTO 350
370 GOSUB 60;GOSUB 100
380 IF TR(1)GOSUB 100;GOTO 420
390 M=M+JY(1);IF M>7M=7
400 CX=-44;CY=0;PRINT #1,M,#1," "
410 GOTO 380
420 GOSUB 30;GOSUB 50;BOX X,Y,W,H,M;IF TR(1)GOSUB 100;GOTO 440
430 GOTO 420
440 IF TR(1)GOSUB 40;GOTO 110
450 IF JY(1)GOTO 110
460 GOTO 440
470 GOSUB 60;GOSUB 100
480 M=M+JY(1);IF M>7M=7
490 CY=20;CX=-44;PRINT #1,M,#1," ";IF TR(1)GOSUB 100;GOTO 510
500 GOTO 480
510 GOSUB 30;GOSUB 50;BOX X,Y,1,1,7;IF TR(1)GOSUB 100;GOTO 530
520 GOTO 510
530 LINE X,Y,M
540 IF TR(1)GOSUB 40;GOTO 110
550 IF JY(1)GOTO 110
560 GOTO 540
570 PRINT " (1) LARGE";PRINT " (2) SMALL
580 PRINT " FONT?
590 F=F+JY(1);IF F>2F=2
600 IF F<1F=1
610 CY=7;CX=-55;PRINT #1,F;IF TR(1)GOTO 630
620 GOTO 590
630 IF F=1CF=LA.
640 GOSUB 100
650 C=C+JY(1);IF C<33C=33
660 IF C>99C=99
670 CY=0;CX=-40;TV=C;IF TR(1)GOSUB 100;GOTO 690
680 GOTO 650
690 GOSUB 30;GOSUB 50;CX=X;CY=Y;TV=C;IF TR(1)GOSUB 100;GOTO 710

```

BLUE RAM or VIPER memory systems only.

```

700 GOTO 690
710 IF JY(1) GOTO 110
720 IF TR(1) GOSUB 40; GOTO 110
730 GOTO 710
980 CT=-52; NT=0; *PRINT ; TV=27; TV="3"; TV=24; RETURN
990 FOR S=1+16383 TO 40+16383
1000 :PRINT ; CT=-52; TV=27; TV=76; TV=152; TV=1; FOR I=S+4079 TO S STEP -40; FOR R=1 TO
4; B=BYTE%(I,1); TV=B; NEXT R; NEXT I; PRINT
1010 NEXT S; RETURN
1020 CY=50; GOTO 110
2000 CLEAR; PRINT " 1. TO PRINTER
2010 PRINT " 2. TO TAPE
2020 PRINT " 3. INPUT TAPE
2030 PRINT " SELECT",
2032 S=S*JY(1); IF S>3=S
2033 IF S<1S=1
2034 CX=-40; CY=30; PRINT , #1, S
2035 IF TR(1) #1 GOTO 2032
2036 IF S=160SUB 100; 60SUB 25; 60SUB 50; 60SUB 980; GOTO 110
2038 IF S=260SUB 100; 60SUB 25; CLEAR ; 60SUB 50; PUTX(16382), 4091; GOTO 110
2040 IF S=360SUB 100; 60SUB 25; CLEAR ; GET X(16382); 60SUB 40; GOTO 110

```

```

1 .HOCKEY
2 .BY BRIAN_HILDEBRAND
3 .INSPIRED_BY PETE_MURRAY
10 clear ; E=0; I=2; F=-2; H=0; O=0; P=0; K=0; L=0
20 box 0,39,141,3,1; box 72,-2,3,85,1; box 0,-
43,141,3,1; box -72,-2,3,85,1; box 72,-2,3,20,2
; box -72,-2,3,20,2
30 goto 100
40 box A,B-2,3,5,1; A=A+C; box A,B+27,3,5,1; bo
x A,B-2,3,5,1
50 box A,B-32,3,5,1; A=A+C; box A,B+12,3,5,1; b
ox A,B-17,3,5,1
60 if C=50; goto 110
70 if C=-50; goto 125
80 if R=1_B=KN(1)+20; A=-60; C=50; goto 40
90 if R=2_B=KN(2)+20; A=60; C=-50; goto 40
91 box A,-2,3,79,2; A=A+C; box A,-2,3,79,2; A=A
+C; box A,-2,3,79,2; goto 80
100 if O#KN(1)+20_R=1; A=-60; C=50; goto 91
110 O=KN(1)+20
120 if P#KN(2)+20_R=2; A=60; C=-50; goto 91
125 P=KN(2)+20
126 box E,F,2,2,2; E=E+I; F=F+H
130 if (PX(E+3,F)) I=-2
140 if (PX(E-3,F)) I=2
150 if (PX(E,F+3)) H=H-2
160 if (PX(E,F-3)) H=H+2
170 box E,F,2,2,1;
175 if E<-72K=K+1; goto 190
176 if E>73L=L+1; goto 190
178 if TR(1)+TR(2) goto 10
180 goto 100
190 box E,F,2,2,2; CY=30; print L,; print #13,K
; for M=1 to 100; next M; box -35,30,20,8,2; box 4
5,30,20,8,2; box -72,30,3,20,1; E=0; F=-2; goto 1
00

```

```

26 gosub 61W=P+44X=0:goto 39
27 gosub 91print "SP0ILSPORT!"
28 gosub 81CX=-65:print "YOU_QUIT_AFTER_",#1
  ,N," MOVES!"
29 gosub 81print "ANSWER?..(Y/N)
  if KP#89:goto 51
31 gosub 91BC=119:FC=0:print "CHEATING???"
32 B=0:K=0:gosub 10:gosub 11:gosub 9;CX=-23;
  CY=-5:if I=H+32to 33step -1:W=@(I);X=CX;Y=C
  Y-65:CY=5:if Kqto 36
33 if B=0:goto 36
34 Z=K:if Z=99:goto 19
35 if Z=13K=1
36 B=R+11:print "MOVE_#_",#1,B,"_",Y:W=M:if B
  <C=C:B=20,X=35,13,9,2:CX=19;CY=35:print #1,
  C:goto 21,35,13,9,3
37 B=23,35,13,9:gosub 5;CX=X;CY=Y;W=M:if B=10:
  10:OX=23;CY=C
38 next I:goto 50
39 if M=835:1:goto 19
40 if Lqto 44
41 if S=0:goto 44
42 if H,S=0:goto 19
43 Z=(P-@)(F-@)(P+1):@P(1)=Z:gosub 3:P=F+1
  :gosub 31:I=1:N=1:S=0:7:0:CX=-65;CY=15:print
  "SP_MOVE":goto 46
44 if (P>11):Hqto 19
45 gosub 5
46 for I=to 15:if @I()>@I+1:goto 19
47 next 1:gosub 9:if N<D:print "WOW! SMARTY!"
  :gosub 8
48 CX=-47:print "YOU_WON_IN_",#1,N," MOVES!"
  :if N<D:gosub 81CX=-41:print #1,N,D," MOVE_THA
  N_ME!"
49 if D>N:gosub 8;CX=-41:print #1,D-N," FEWER
  THAN_ME!" :gosub 81CX=-77:print "BET_YOU_CAN'
  T_DO_IT_AGAIN!"
50 gosub 8
51 N=0:gosub 10:gosub 9;R=0:CX=-35:print "NE
  W_GAME?..(Y/N)"
52 if KP#89:gosub 9:goto 19
53 run.

```

©1984 R. Fabris

OCT 31, 1984

# ARCADIAN

Vol 6 No 11/12

## THE GAME PLAYER

ponders the future  
by examining the past . . .

### PART ONE

As the 1983-84 volume of the Arcadian comes to a close and as it is about to enter its seventh year of publication, it is an appropriate time to glance back at the past year's game reviews, some significant events in gaming, and examine what appears to be an alarming and ominous trend in the videogame industry, including and most importantly those software manufacturers who create and sell games for the Astrocade system.

It was just over a year ago that the software market had an historic first, when Esoterica Ltd. released **TREASURE COVE**, the first privately produced cartridge game for the Astrocade system. At a time when Astrocade had not released a new cartridge in over a year, the news of this action by Esoterica was the most exciting and significant event since the "new" **ASTROCADE BASIC** cartridge hit the scene.

The release of **TREASURE COVE** represented an important change for Astrocade owners. They hopefully would no longer have to depend on Astrocade as a sole source of cartridge games, a most significant factor since the Astrocade company was having serious difficulty surviving. (See "Video Game Death ..." Vol. 5, No. 1, Pg. 3). Even today the future of Astrocade remains uncertain, and in the light of the current state of the home video-game computer industry, do not be surprised if you never see another cartridge from the Astrocade people again.

Esoterica later went on to release a cartridge titled **BLASTROIDS**, which, along with **TREASURE COVE**, were never submitted for review. The Esoterica people have recently announced that both of these cartridges will no longer be available, a sign of an unfortunate trend that may be spreading to other companies.

Soon after the Esoterica cartridges, L&M Software released its first cartridge, **MS. CANDYMAN**, (Vol. 6, No. 1) an instant success for L&M and still one of the finest cartridge games to ever be made for the Astrocade system. It featured very high resolution and extremely colorful graphics, along with an outstanding musical score.

Eventually, the year 1984 would see three more software manufacturers enter the cartridge game scene, with all but one being established companies who all had been producing games on tape cassettes.

New Image gave us a cartridge called **SNEAKY SNAKE**, (Vol. 6, No. 10) a colorful underwater action game similar in concept to Astrocade's **COSMIC RAIDERS**, produced by Bit Fiddlers and distributed by L&M Software. Finally, and most recently, a cartridge titled **MAZEMAN** was put on sale by a new-comer

to the marketing scene, Dave Carson, a long-time subscriber and contributor to the Arcadian. Although **GAME PLAYER** has received numerous letters requesting recommendations on **MAZEMAN**, we have not had a cartridge made available for review. As with any product that is purchased "sight unseen", we can only suggest the old adage "buyer beware".

The total number of privately produced cartridge games currently available stands at seven, including the **MUNCHER** cartridge, which probably is the most popular game played on the Astrocade system. There is a very interesting history and story behind how this cartridge came to be, but I am afraid we are not yet at liberty to comment. (Rumor has it that the **MUNCHER** cartridge was discovered at an abandoned science outpost on Omicron Ceti II by a landing party from the USS Starship Enterprise. Later, during a research mission via a space-time warp to study 1984 Earth cultures, the cartridge was accidentally beamed down and subsequently lost somewhere in San Jose, California.)

The past year also saw the emergence of two new software manufacturers, specializing in taped cassettes. A company in Canada calling itself **Astrogames** released a four-game tape cassette simply called **Tape A-1** (Vol. 6 No. 1). It was and is a nice collection of games, especially at a price of only nine dollars. Later, **Astrogames** would release **Tape A-2**, (Vol. 6 No. 5) containing the games **NIGHT BOMBERS** and **ADVENTURE**, the latter of which is particularly interesting, being similar in concept to the popular Atari game **PITFALL**.

In May, Fred Rodney Educational Software entered the market, releasing a tape cassette titled **MORSE CODE TRAINER** (Vol. 6 No. 4), an excellent tutorial of the "Code". His next release was **ASTRO ANALYST** and **MEMOMAX** (Vol. 6 No. 8, both), two cute brain teasers.

This past year has been an optimistic one for game players everywhere in terms of new cartridges and new manufacturers. But this writer fears dark clouds may be in the distance for all who enjoy playing games on the Astrocade system. As one who reviews new games, I am always striving to stay well informed of what's happening in the area of soon-to-be-released products and games for the Astrocade. In doing so, I have noticed a trend that has me concerned.

The number of games, both cartridge and tape, that have been released in the last six months, was zero. Prior to that, Fred Rodney released four tape programs, Dave Carson put out a cartridge, his first, and **Astrogames** produced a couple of tapes. Early in the year we saw **SEA DEVIL** and **SNEAKY SNAKE**.

Granted, the summer is generally slower. But there are some facts that cannot be ignored. Remember **Wavemakers**, the company that produces one of the best line of tape games? No new games for over a year. **Wavemakers** had been producing one new game about every two to three months. And then there's the other "biggie", L&M Software. Nothing from them either for a year, not since the



EXTENDED MEMORY  
PRODUCTS REVIEW

BY DAVE CARSON

SINCE THIS IS THE FIRST COLUMN IN A WHILE, I HAVE SOME UPDATING TO DO. I'VE BEEN REALLY BUSY SINCE GETTING BACK TO WORK. I'M WORKING IN A LOCAL COMPUTER SHOP, PROMOTING OUR SYSTEM AS MUCH AS POSSIBLE, AND KEEPING A CLOSE EYE ON WHAT IS HAPPENING IN THE HOME COMPUTER WORLD. I HAVE SOME VERY GOOD MATERIAL TO REPORT ON IN THE NEXT COUPLE OF ISSUES BEGINNING WITH THIS MONTH'S FEATURE. OUTPOST 19 FROM WAVEMAKERS. THERE IS ONE ITEM THAT I WOULD RATHER NOT HAVE TO REPORT. SOON AFTER MY LAST COLUMN APPEARED, RUSTY FROM R&L ENTERPRISES CALLED TO INFORM ME THAT R&L NO LONGER EXISTS. A REAL SAD NOTE. THE 64K BOARD WAS AN EXCELLENT PIECE OF HARDWARE AND SHOWED A LOT OF PROMISE AND EXCITEMENT FOR THE BALLY-ASTROCADE SYSTEM. THE REASON HE GAVE ME WAS LACK OF SUPPORT AND SALES.

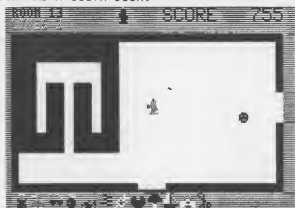
AS BUSY AS I'M TOLD THAT MIKE PEACE HAS BEEN, HE STILL FINDS TIME TO CRANK OUT A NEW MASTERPIECE EVERY ONCE IN A WHILE. OUTPOST 19 IS HIS LATEST EXTENDED BASIC CREATION AND DEFINITELY IS A MASTERPIECE. MORE SOFTWARE LIKE THIS AND INTEREST IN THE SYSTEM WOULD BE GROWING RATHER THAN DECLINING!

THE SCENARIO OF THE GAME IS THAT YOU ARE STRANDED ABOARD A LONELY SPACE STATION. SEARCHING YOUR SURROUNDINGS WILL REVEAL TROPHIES AND TREASURES THAT YOU MAY "PICK UP" FOR POINTS. YOU WILL ALSO FIND THAT YOU ARE NOT QUITE ALONE. THERE IS A REALLY BAD GUY ON BOARD THAT CAN PASS THROUGH WALLS, LEAVES A TRAIL OF "POISONED" GARBAGE, AND IS OBSESSED WITH GETTING RID OF INTRUDERS (YOU)! HE ALSO POISONS THE TREASURE IN THE ROOM THAT HE'S IN SO DON'T PICK IT UP WHEN HE IS PRESENT.

THE SPACE STATION IS EQUIPPED WITH A COMPUTER WHICH YOU CAN ACCESS BY PULLING THE TRIGGER. IN DOING SO, YOU WILL BE SHOWN A LOCATION GRID THAT IS MORE OR LESS A MAP OF THE LEVEL THAT YOU ARE ON. IT SHOWS ALL OF THE ROOMS, ROOM NUMBERS, AND WHETHER THERE IS STILL A TREASURE IN THE ROOMS. THE GRID ALSO SHOWS YOUR LOCATION AND THE LOCATION OF THE MONSTER IN HIS QUEST TO GET TO YOU. USE IT OFTEN!!

THE ROOMS ARE NUMBERED FROM ONE TO SIXTEEN. IN THE EVEN NUMBERED ONES, YOU WILL GET A BURST OF ENERGY (SPEED) WHEN PICKING UP A TROPHY. IN THE ODD NUMBERED ROOMS THERE ARE INVISIBLE TRANSPORTERS THAT WILL SEND YOU TO A NEW LOCATION ON OUTPOST 19. THESE TRANSPORTERS ARE ALWAYS IN THE SAME PLACE AND WILL ALWAYS SEND YOU TO THE SAME ROOM. IT TAKES PLAY EXPERIENCE TO BECOME FAMILIAR ENOUGH TO USE THE TRANSPORTERS EFFICIENTLY. AFTER REACHING THE FOURTH LEVEL, THE MONSTER BEGINS TO USE HIS OWN TRANSPORTER. SO BEWARE!

THE ROOMS ARE ALL DIFFERENT IN THEIR GENERAL LAYOUT. THEY EACH HAVE A TREASURE AND SOME TYPE OF SIMPLE MAZE CONFIGURATION. THE DOORS MAY LEAD IN ANY OF FOUR DIRECTIONS WITH SOME BEING "ONE WAY". MEANING THAT IF YOU GO THROUGH THEN YOU CAN'T GET BACK BY THE SAME DOOR. ROOM 13, SHOWN HERE, HAS AN EAST DOOR AND A SOUTH DOOR.



YOUR PLAYER PIECE IS THE FACE NEAR THE EAST DOOR. THE "FIRE PLUG" IN THE CENTER IS THE TREASURE. THERE IS A TRANSPORTER SOMEWHERE (MAYBE IN THE MAZE??). THE STATUS LINE AT THE TOP SHOWS ROOM NUMBER AND REMAINING LIVES ON THE LEFT. IN THE CENTER IS THE MOST VALUABLE TREASURE AT THE PRESENT TIME. IN THIS CASE IT HAPPENS TO BE THE ONE IN THIS ROOM. YOUR SCORE IS ON THE RIGHT. THE LOWER STATUS LINE KEEPS TRACK OF THE ITEMS THAT YOU HAVE COLLECTED. YOU NEED ALL SIXTEEN IN ORDER TO ADVANCE TO THE NEXT LEVEL.

THE COMPUTER DISPLAY BELOW SHOWS THE PLAYER LOCATION IN ROOM 9 AND THE BAD GUY IN ROOM 11. THE TRAIL HE'S LEAVING SHOWS HIS PROGRESS DURING THE TIME THIS DISPLAY WAS USED.

| LEVEL 1 LOCATION GRID |    |    |    |
|-----------------------|----|----|----|
| 13                    | 14 | 15 | 16 |
| 1                     |    | 11 | 12 |
| 5                     | 6  | 7  | 8  |
| 9                     | 2  | 3  | 4  |

THE STATUS LINES SHOW LEVEL, LIVES, CURRENT MOST VALUABLE TROPHY, AND TROPHIES GATHERED.

OUTPOST 19 IS A RELATIVELY EASY GAME TO PLAY IN THE EARLY LEVELS. LATER LEVELS PRESENT AN ENTIRELY DIFFERENT SITUATION WHEN THE MONSTER CAN USE HIS OWN TRANSPORTERS.

THERE IS LOTS OF FUN AND CHALLENGE FOR EVERYONE IN THIS GAME. IT TAKES STRATEGY TO STAY AHEAD OF THE BAD GUY AND WHEN HE GETS CLOSE, SKILL AND REFLEXES. DON'T TOUCH HIS TRAIL. IN FACT, DON'T TOUCH ANYTHING IN THE ROOM BUT THE WALLS IF HE IS IN THE ROOM WITH YOU.

THE USE OF GRAPHICS AND COLOR IN OUTPOST 19 ARE GREAT. SO IS THE SOUND AND OVERALL PLAYABILITY. WITH THE EXCEPTION OF ONE OR TWO CARTRIDGES THAT I CAN THINK OF, THIS MAY BE THE BEST PIECE OF GAME SOFTWARE YET IN EXISTENCE FOR THE BALLY-ASTROCADE MACHINE. THIS MAY BE A RATHER STRONG STATEMENT BUT IT'S MY HONEST OPINION.

I REALLY HOPE THAT MIKE PEACE CAN CONTINUE TO FIND THE TIME TO WRITE IN E.B. AND PRODUCE SOFTWARE FOR US. THE MORE HE DOES, THE BETTER IT GETS. EACH SEEMS TO BE MORE SOPHISTICATED AND INNOVATIVE THAN THE LAST. KEEP IT UP, MIKE. WE NEED YOU. MIKE NEEDS OUR SUPPORT IN ORDER TO DO THIS TYPE OF WORK. KEEP IT PROFITABLE FOR HIM. I HAVE YET TO SEE AN E.B. GAME FROM HIM THAT I COULD NOT FULLY RECOMMEND. BY ALL MEANS, OUTPOST 19 IS A "MUST HAVE" PIECE OF SOFTWARE FOR ALL BLUE RAM USERS. IT HAS MY HIGHEST RECOMMENDATION!!!

STILL TO COME, ANOTHER GAME FROM KEN LILL OF GAMBITS SOFTWARE. AND SOME BLUE RAM CONVERSIONS OF SOME OF THE CLASSICS FROM WAVEMAKERS SO STAY TUNED. DON'T FORGET TO RENEW YOUR SUBSCRIPTIONS, THERE'S STILL LIFE LEFT IN THE OLD BALLY!!

ALL QUESTIONS AND COMMENTS INCLUDING A S.A.S.E. WILL BE ANSWERED.

DAVE CARSON  
P.O. BOX 39 (FOR UPS-389 STATE ST.)  
KIPTON, OHIO  
44849

MS. CANDYMAN cartridge. (Although they did distribute Bit Fiddler's SEA DEVIL cartridge) They, too, had been averaging about four to five new releases per year. Most recently was the announcement that Esoterica Ltd. would no longer be making the BLASTDROIDS and TREASURE COVE cartridges. Why?

And whatever happened to Tiny Arcade, Edge Software and the George Moses Co.? All, at one time, were major producers of Astrocade games, and all of whom have not been heard from in well over two years.

I cannot give you a good or satisfactory answer. I can, however, point out that profits from videogame Arcades across the nation are down 50 percent and that a number of videogame trade magazines have folded. In my area, Washington, D.C., I can name more Arcades that have recently closed than I can those that are still in business.

The key question then, is, are videogames a fad that is now passing? Industry-wide, the answer seems to be, Yes. How will this affect the Arcadian and the companies, that have been making games for the Astrocade? Has the Astrocade system taken its last breath?

GAME PLAYER, 48-G Ridge Road,  
Greenbelt, Maryland 20770)

© M. L. Prosize 1984

```

6 .
8 .
20 PRINT " (C)BALLY CHESS BOARD"
30 PRINT " BY JOHN COLLINS
50 GOSUB 3000:GOSUB 2000
80 Q=1:GOSUB 1000:Q=-1
90 GOSUB 1000:GOTO 80
1000 M=-20+Kb10:N=-45+Lb10:IF (Lc2)b2*LGOTO 1030
1010 IF (Kc2)b2=KGOTO 1040
1020 BOX M,N,10,10,2:IF G=1IF Q=1BOX M,N,8,8,1
1025 RETURN
1030 IF (Kc2)b2=KGOTO 1020
1040 BOX M,N,10,10,1:IF G=1IF Q=-1BOX M,N,8,8,2
1045 RETURN
1000 I=0:CK=-75:CY=40:IF Q=1PRINT " WHITE":GOTO 1005
1002 PRINT " BLACK"
1005 I=I+1:PRINT " FROM":INPUT " RANK":R:INPUT " FILE":S
1007 IF R=0INPUT "LOC":S:INPUT "VAL",@(S):GOTO 1005
1010 T=S*(R-1)*8:P=*(T):IF (T<1)+(T>64)GOTO 1005
1020 IF @(T)<1IF Q=1GOTO 1005
1030 IF @(T)>1IF Q=-1GOTO 1005
1040 I=I+1:PRINT " TO":INPUT " RANK":U:INPUT " FILE":U
1050 W=U*(U-1)*8:IF (W<1)+(W>64)GOTO 1040
1060 IF @(W)>0IF Q=1GOTO 1040
1070 IF @(W)<0IF Q=-1GOTO 1040
1080 @(T)=0:@(W)=P
1090 K=S:L=R:G=0:GOSUB 1000
1010 K=U:L=U:G=1:GOSUB 1000
1020 Z=200+ABS(Pb10):GOSUB Z
1025 IF ABS(P)=6IF ABS(T-W)=2 PRINT "MOVE ROOK":CX=-75:CY=30:GOTO 1005
1030 IF I>2GOSUB 2000
1040 RETURN
2000 CLEAR :BOX 25,0,86,86,3
2010 FOR I=1TO 64:M=-20+((I-1)*8)b8b10
2020 N=-35+((I-1)*8)b10
2030 IF ((I-1)*8)=((I-1)*8)*2b2GOTO 2040
2032 IF (Ic2)b2*1BOX M,N,10,10,3
2034 IF (Ic2)b2=1IF @(I)<0BOX M,N,8,8,3
2035 IF @(I)=0GOTO 2100
2036 IF (Ic2)b2=1IF @(I)>0BOX M,N,8,8,3
2038 GOTO 2050
2040 IF (Ic2)b2=1BOX M,N,10,10,3
2042 IF (Ic2)b2=1IF @(I)<0BOX M,N,8,8,3
2050 IF (Ic2)b2=1IF @(I)>0BOX M,N,8,8,3
2060 Z=200+ABS(@(I)b10):GOSUB Z
2100 NEXT I:RETURN
2200 RETURN
2210 BOX M,N-1,2,3,3:BOX M,N+1,4,1,3
2214 BOX M,N-3,4,1,3:BOX M,N+2,2,1,3:RETURN
2220 BOX M+2,N-1,2,7,3:BOX M-1,N-3,3,2,3
2222 BOX M-1,N,3,1,3:BOX M,N+1,3,1,3
2224 BOX M,N+2,1,1,3:RETURN
2230 BOX M,N-3,6,2,3:BOX M,N-1,4,2,3
2234 BOX M,N+1,2,3,3:RETURN
2240 BOX M,N-3,6,2,3:BOX M,N,4,4,3
2242 BOX M-3,N+2,1,2,3:BOX M+2,N+2,1,2,3
2246 BOX M,N+2,2,1,3:RETURN
2250 BOX M,N-4,8,2,3:BOX M,N-1,6,4,3
2252 BOX M,N+1,8,1,3:BOX M-2,N+2,2,1,3
2254 BOX M+2,N+2,2,1,3:RETURN
2260 BOX M,N,8,2,3:BOX M,N-2,6,1,3
2262 BOX M,N-3,8,2,3:BOX M,N+1,2,1,3
2264 BOX M,N+2,6,1,3:BOX M,N+3,2,1,3:RETURN
3000 FOR I=1TO 48:@(I)=0:NEXT I
3010 FOR I=9TO 16:@(I)=1:@(I+40)=-1:NEXT I
3020 @(1)=4:@(8)=4:@(57)=-4:@(64)=-4
3030 @(2)=2:@(7)=2:@(58)=-2:@(63)=-2
3040 @(3)=3:@(6)=3:@(59)=-3:@(62)=-3
3050 @(4)=5:@(5)=6:@(60)=-5:@(61)=-6:RETURN

```

OCT 31, 1984  
OTHELLO  
BY BOB WEBER

# ARCADIAN

Vol 6 No 11/12

USES HAND CONTROLLER. ENTER 8 PLAYERS AND MACHINE WILL PLAY ITSELF TO DEMONSTRATE HOW THE GAME IS PLAYED. SCORE IS DISPLAYED ON THE SCREEN THROUGHOUT THE GAME. MOVES ARE MADE BY PUSHING THE JOY-STICK FORWARD AND TURNING THE KNOB TO SELECT LETTER. THEN WITH THE JOYSTICK IN THE NORMAL POSITION, TURN KNOB TO SELECT NUMBER; PULL THE TRIGGER TO MAKE YOUR MOVE. IF YOUR MOVE IS PUT ON THE SCREEN AND THEN REMOVED, YOU HAVE MADE AN ILLEGAL MOVE. BOARD IS LETTERED AND NUMBERED FOR TOURNAMENT OTHELLO. USE HAND CONTROLLER #1 TO SELECT THE NUMBER OF PLAYERS. PLAYS 8 TO 2 PLAYERS

LOWERCASE = 1-BYTE KEYPAD WORDS. UNDERScores  
= SPACES. 1574 CHARACTERS

```

1 clear ;goto 20
2 B=L;O=0;E=B+10;D=B-Ex10;Y=-36+Dx8;X=-36+Ex
3;if A=2goto 350
3 if A=3goto 360
4 box X,Y,5,5,1;box X,Y,3,3,3;box X,Y,1,1,3;
A=2;return
5 NT=1;P=0
6 L=L+N;A=@(L);MU=L;if A=R_P=1;goto 6
7 NT=0;if A=M;T=2;return
8 if A=0;return
9 if A=3;P=1;T=2;goto 530
10 if A=3;return
11 L=L+N;A=@(L);if A=R_U=1;@(L)=M;A=M;gosub
2
12 if A=M;return
13 goto 11
20 &(9)=72;BC=rdnd (32)x8;FC=BC+4;rdnd (32)x8;
&(0)=BC;&(1)=BC;A=FC+rdnd (32)x8;&(2)=A;&(3)=A
+1
30 for Z=1to 87step 2;box 0,0,Z,Z,3;next Z;C
Y=38;input "PLAYERS?"Q
50 clear ;for Z=0to 100;@(Z)=0;next Z;T=1;fo
r Z=1to 8;for W=1to 8;@(Zx10+W)=3;next W;next
Z
60 M=1;@(44)=1;@(55)=1;@(54)=2;@(45)=2
70 R=65;for Z=-28to 28step 8;for Y=-38to 38s
tep 76;CX=Z;CY=Y;TV=R;CX=Y;CY=Z;print #1,73-R
;next Y;R=R+1;next Z
80 for X=-32to 32step 8;box X,0,1,64,1;box 0
,X,64,1,1;next X;for L=44to 55;A=@(L);if A<3i
f A>0;gosub 2
90 next L;S=4
100 if S=64;goto 20
110 if M=1;Q=0;M=2;R=1;goto 490
120 if M=2;Q<2;M=1;R=2;goto 490
130 Z=0;if TR(M);goto 130
140 CY=9;print #1,M,"?_",
150 Z=Z+JX(M);if K1Z=0;Y=0;print "00";goto
180
160 Y=Y+JY(M);if Y>8Y=8
161 if Z>8Z=8
162 if Y<2Y=1
170 TV=Z+64;print #1,9-Y
180 if TR(M)Z=Zx10+Y;goto 200
190 goto 140
200 U=0;if Z=0;goto 320
210 A=@(Z);if A<3;A>0;goto 130
220 if M=1;M=2;R=1;goto 240
230 M=1;R=2
240 @(Z)=M;A=M;S=S+1;L=Z;gosub 2
250 for W=-1to 1;for V=-1to 1;N=Wx10+V;L=Z;g
osub 5;next V;next W
260 if Q<2;T=2;goto 510
270 if U=0;@(Z)=3;A=3;L=Z;S=S+1;goto 2
280 goto 460
320 O=0+1;if O>1;goto 20
325 if Q=0;goto 100
330 if M=2;M=1;goto 100
340 M=2;goto 100
350 box X,Y,5,5,1;A=1;return
360 box X,Y,5,5,2;goto 330
460 Z=0;for T=1to 88;if @(T)=2Z=Z+1
470 next T;CY=-15;print "#1=",#2,Z;print "#2
=",#2,S-Z
480 goto 100
490 CY=1;print "HMM..";F=0;T=2;H=-3;for Z=1i
to 88;if @(Z)=M;goto 250
510 next Z;if H=-3T=1;CY=1;print #1,R,"_00"
;NT=3;for Z=1to 15;MU=61;next Z;NT=0;if Q=1M=
2
515 if H=-3;goto 320
520 goto 620
530 G=0;K=L+10;J=L-Kx10;if (J=1)+(J=8)G=G+1
540 if (K=1)+(K=8)G=G+1
550 if (J=2)+(J=7)G=G-1
560 if (K=2)+(K=7)G=G-1
570 if G<H;return
580 if G>H,H=G;F=L;goto 600
590 if rnd (2)=1F=L
600 return
620 @(F)=M;S=S+1;A=M;I=F+10;K=F-Ix10;CY=1;pr
int #1,R,"_",TV=I+64;print #1,9-K;L=F
630 gosub 2;Z=L;T=1;goto 250

```

OCT 31, 1984

Vol 6, No 11/12

LOWERCASE = 1-BYTE KEYPAD WORDS, UNDERScores  
= SPACES. 1552 CHARACTERS

```

3 clear ;*(38)=0;*(39)=0
4 T=200;D=3;NT=B;S=36;BC=176;FC=101;CX=H;CY=
-Fprint "KONCENTRATION!",CX=H;CY=16;NT=0
5 print "EASY=1";CX=H;print "HARD=2";CX=H;in
put "1_OR_2";G;NT=B;*(9)=255
6 for I=1to 36step 2;*(I)=rnd (26)+64;*(I+1)
=*(I);next I;for I=1to 36
7 A=rnd (36);*(0)=*(A);*(A)=*(I);*(I)=*(0);in
ext I
8 A=rnd (36);B=rnd (36);if A#B;*(A)=*(B);*(
A)=36;*(B)=36;box 0,0,159,F,2;goto 10
9 goto B
10 BC=rnd (32);*(B)=rnd (32);*(8)=3;for Y=-28to
35step 16;MU=X;Y=142;for X=-63to 80step 16;
MU=X;box X,Y,15,15,1
15 box X,Y,9,9;D;next X;next Y;MU=60;MU=53;M
U=44;MU=35;E=1
20 for Y=-28to 35step 16;for X=-63to 80step
16;CX=X;CY=Y;if G=1;F=D=3;T=*(E)
30 if D=1;CX=X-3
40 if D=1;F<10;print 0,0,E,
50 if D=1;F>9;print 0,0,E,
140 E=E+1;next X;next Y;MU=160;MU=140;MU=136
;MU=120
170 if TR(1);goto T
180 MU=50;MU=39;MU=44;goto 170
200 D=1;T=507;M=1;goto 10
250 NT=0;CX=12;CY=F;if T=1;print "PLAYER_1",
;return
255 print "PLAYER_2";return
300 gosub J;NT=0;CX=-70;CY=F;input "box 1 A";
CX=-46;CY=F;C=A;gosub K;CX=-70;CY=32;input "b
ox 2 B"
350 if A=B;CX=-69;CY=F;print "box 2 = box 1
_NO!_NO!";NT=50;gosub L;box 0,-F,159,9,2;got
o 300

```

```

400 CX=-46;CY=32;C=B;gosub K;if *(A)=36;*(
B)=36;goto N
405 if *(A)=36;goto D
410 if *(B)=36;goto D
420 if *(A)=*(B);goto 3020
500 CX=-60;CY=F;print "NO_MATCH";NT=20;gos
ub L
502 if S<CX=-60;CY=F;gosub J;NT=0;print "G
AME_OVER_PULL_TR(1)",;goto J40
505 if T=1;T=2;gosub 250;goto 510
507 T=1;gosub 250
510 if TR(1);goto 300
515 if S=0;goto 502
520 goto 510
1000 print "MATCH!!!";NT=50;MU=60;MU=33;MU=3
9;NT=5;E=1;for Y=-28to 35step 16;for X=-63to
80step 16;CX=X;CY=Y
1010 MU=X;MU=Y;if E=A_C;A=S-1;goto P
1020 if E=B_C;B=S-1;goto P
1090 E=E+1;next X;next Y;return
2200 print 0,0,C,"=",T;V=*(C);return
2300 box X,Y,15,15,2;T;V=*(C);*(C)=0;goto 109
0
2400 for I=1to 3;MU=241;MU=216;MU=205;next I
;return
3000 *(T+37)=*(T+37)+164
3010 *(T+37)=*(T+37)+164
3020 *(T+37)=*(T+37)+*(A)+*(B)
3030 CX=25;CY=F;if M;print "1";CX=25;print "
2";M=0
3040 CX=F;CY=F;print 0,1,*(38);CX=F;print 0,1,
*(39)
3050 CX=-30;CY=F;gosub Q;gosub 250;goto 510
4000 box -F,36,81,16,2;box 0,-F,159,9,2;retu
rn
5000 if TR(1);run
5010 goto J40

```

SET THESE VARIABLES BEFORE SAVING TO TAPE  
F=40 H=-39 J=4000 K=2200 L=2400 N=3000  
D=3010 P=2300 Q=1000

## PROG 'CLOCK' 5/19/84 SEK

```

10 CLEAR ;NT=0;BC=158;FC=0
20 'CLOCK' S.KENDALL 5/19/84
70 CY=30;INPUT " ENTER HR & MIN"A,B
71 CLEAR
100 BOX 0,0,100,40,2
120 FOR H=ATO 24;IF H=24 A=0
130 FOR M=BTO 59;IF M=59 B=0
140 FOR S=0TO 59
144 CY=10;CX=-34;PRINT "HR MIN SEC"
150 CY=-10;CX=-34;PRINT #1,H,#2," : ",#2,M,#2," : ",#2,S
160 FOR N=1TO 740;NEXT N;TIME ADJUST.
170 NEXT S;NEXT M;NEXT H;GOTO 120

```

This little program puts a digital clock on the screen. Change the value of N in line 160 to speed up or slow down the clock. 740 was too slow for my Arcade.

## Fall Sale

This month we are expanding our sale items to cover cassette tapes (Astrocade BASIC required). We are offering your choice of these tapes at the Price of \$3.95 each. Please, when ordering list second and third choices. Quantities are limited, and when they are gone they are gone so place your order now!

The following titles are available:

### L&M software:

Candy man -- Secret of Pellucitar -- Ayatollah Dart Board/Crazy Ball  
 -- Alien Invasion -- Target/Mind Bender -- Space Sleuth/Fox & The  
 Hare -- 3D Tic Tac Toe/Mission Impossible -- Exitor's Revenge --  
 Space Quest 2001/Starbase 2000 -- Sink the U-Boat/Air Drop

### WaveMakers

Pack Rat -- Collision Course -- Castle of Horror -- Lookout for the  
 Bull -- The Gate Escape -- Character Analysis -- Max the Robot from  
 Space/Horse Race -- Whiz Quiz -- Backgammon -- Guitar Course --  
 Slot Machine -- Maze Race -- Flying Ace

### Tiny Arcade

Beep/Star Seige -- Space Gauntlet /Quadron -- Viperian/Cruncher  
 Vindicator/ Art Show & Fireworks -- Omega Valley/Astro Terror

### Bit Fiddlers

Goldfish Demo -- Chicken!

Please note that the listings under the company headings are separate tapes for \$3.95 each

Please remember to make second and third choices when ordering these tapes. The quantity is very limited in some cases.

To go along with this months special tape bargains we are offering the Astrocade BASIC at the low, low Price of \$9.95 each. We also have a few of our \$4.95 cartridges left we will continue these this month or until the supply is depleted. You can choose from the following cartridges  
 280 Zzap/Dodgem -- Red Baron/Fanzer Attack -- Astro Battle --  
 Dogpatch -- Space Fortress -- Baseball -- Football -- Bally Pin  
 -- Biorhythm -- BlackJack/Poker. Please list a second and third **choice**  
 if possible when ordering these cartridges.

## YOUR ASTROCADE SOURCE

This month we find ourselves in a Position to offer Astrocade Arcade units at a very favorable Price. We need to move these units fast. We decided that if we were to succeed in moving these units we had to offer them at a very low Price. We decided that \$34.95 would be a favorable Price, so that is what we are selling them for. Just think, these would cost less than Astrocade's current repair Price--also less than a Pair of hand controllers. These are brand new factory warrented units. Coupled with some of our bargain Priced Games these units would make Great Christmas Presents.

Order by mail or by Phone (no Phone calls on Wednesday please I need at least one day off a week). We accept Master Card, VISA, Personal checks, Money orders, or we can send the order C.O.D.(except to Canada). We can ship the order UPS or Parcel Post. Please include \$1.50 per order to cover the shipping costs. Let us be your one stop source for Astrocade information and Products.

We regret to say the our stocks of the fine Sneaky Snake cartridge by New Image are depleted. The cartridge is now out of Production(at least for the Present time). We will let you know if and when we Purchase some more of this cartridge.

We are also looking to Purchase existing dealer inventories of cartridges. If you have some to sell Please send us a list of what you have and an estimate of how much you want for them. Maybe we can get together and work something out.

This being the last issue of this volume, we would like to thank all of the fellow arcadians who have supported us through the years. We would also like to remind you that we will continue to support the Astrocade as long as there are still people in search of new games. We will continue to Publish our exclusive Astrocade Underground newsletter whenever there is anything new to report--just let us know and we will send you the latest edition at no cost to you.

\* Controllers \$ 54.95/pair \*

ABC HOBBYCRAFT-2155 E. Morgan Ave.-Evansville IN-47711-(812) 477-9661

since 1946

LOWERCASE = 1-BYTE KEYPAD WORDS. UNDERSCORES  
= SPACES. 1199 CHARACTERS

```

10 goto 2400
20 XY=0;line X,Y,3
30 if Y_XY=0;line X,Y,3
40 if Xif Y_XY=0;line -X,-Y,3
50 if X_XY=0;line -X,Y,3
60 return
70 CALL20002
80 CALL20002
90 if TR(1)=0return
100 &(9)=44
110 K=8701;CALL20020
120 clear
130 NT=-1;v
140 &(10)=176
160 NT=1
170 gosub 2000
180 STOP
200 for X=3to 79step 2
210 box 0,X,Y,X,3
220 next X
230 goto 70
300 for Y=79to 3step -2
310 box 0,X,Y+Y-1,Y,3
320 next Y
330 goto 70
500 for Y=0to 40step 10
510 for X=5to 75step 10
520 gosub 20
530 next X
540 next Y
550 goto 70
700 for Y=0to 39
710 X=78-2xY
720 gosub 20
730 next Y
740 goto 70
900 return
1100 for X=0to 79
1110 Y=39-X+2
1120 gosub 20
1130 next X
1140 goto 70
1300 X=79
1310 for Y=0to 42
1320 gosub 20
1330 next Y
1340 goto 70
1500 return
1700 Y=42
1710 for X=0to 79
1720 gosub 20
1730 next X
1740 goto 70
2000 F=21024;G=19494;H=00;return
2010 F=20303;G=21328;H=33;return
2020 F=13313;G=12868;H=00;return
2030 F=16706;G=19532;H=89;return
2040 F=21313;G=21076;H=79;return
2050 F=16706;G=18771;H=67;return
2060 F=17952;G=20053;H=32;return
2070 F=16711;G=17741;H=83;return
2080 F=21837;G=18771;H=67;return
2090 F=22385;G=22351;H=33;return
2100 F=17736;G=19532;H=79;return
2110 F=16928;G=17753;H=32;return
2200 for Z=1to 32767
2210 W=Z+12
2220 gosub 2030+RMx10
2230 W=Z+2
2240 if RM=0gosub 200
2250 for V=3to 17step 2
2260 W=Z+V
2270 if RM=0gosub Vx100
2280 next V
2290 next Z
2300 goto 2200
2399 .SET-UP_SECTION:
2400 if @ (1)=8693goto 2450
2410 for R=0to 87
2420 print R,
2430 input ""@ (R)
2440 next R
2450 .
2460 clear
2470 .
2480 NT=-1;v
2490 &(9)=44
2500 &(10)=172
2510 A=-43;B=1845;C=-22499
2520 D=20012;E=-13871
2530 gosub 2020
2540 CALL20002
2550 for R=0to 87
2560 X(2xR+19824)=@ (R)
2570 FC=Rx8-696
2580 next R
2590 J=8691;K=19824
2600 L=-27102;M=-1202
2610 N=201
2630 CALL20002
2640 CALL20020
2650 &(9)=20
2660 goto 2200

@ (27)=1824
@ (28)=21050
@ (29)=12876
@ (30)=19976
@ (31)=19025
@ (32)=3122
@ (33)=31822
@ (34)=21974
@ (35)=8352
@ (36)=14855
@ (37)=20046
@ (38)=2354
@ (39)=20658
@ (40)=3855
@ (41)=3855
@ (42)=2866
@ (43)=7858
@ (44)=32485
@ (45)=767
@ (46)=11263
@ (47)=2423
@ (48)=16582
@ (49)=11127
@ (50)=2423
@ (51)=32570
@ (52)=11127
@ (53)=2423
@ (54)=16186
@ (55)=11127
@ (56)=2423
@ (57)=6145
@ (58)=4856
@ (59)=7749
@ (60)=7994
@ (61)=14770
@ (62)=12408
@ (63)=15878
@ (64)=332
@ (65)=8
@ (66)=12809
@ (67)=19999
@ (68)=4851
@ (69)=2817
@ (70)=4856
@ (71)=3653
@ (72)=15983
@ (73)=13829
@ (74)=30451
@ (75)=64
@ (76)=0
@ (77)=1
@ (78)=0
@ (79)=0
@ (80)=0
@ (81)=0
@ (82)=0
@ (83)=0
@ (84)=0
@ (85)=0
@ (86)=256
@ (87)=19456

```

## @ ( ) ARRAYS

```

@ (0)=-6715
@ (1)=8693
@ (2)=19998
@ (3)=-4090
@ (4)=7387
@ (5)=-25429
@ (6)=3855
@ (7)=3855
@ (8)=20284
@ (9)=28290
@ (10)=11127
@ (11)=12517
@ (12)=-2807
@ (13)=-14722
@ (14)=30472
@ (15)=58
@ (16)=-3762
@ (17)=-24473
@ (18)=1824
@ (19)=20538
@ (20)=12876
@ (21)=19975
@ (22)=4015
@ (23)=3855
@ (24)=28431
@ (25)=-14724
@ (26)=-24491

```

The first step of this colorful display program will ask you to load the array.



Oct 31, 1984

## ARCADIAN

Vol 6 No 11/12

LOWERCASE = 1-BYTE KEYPAD WORDS, UNDERSCORES  
= SPACES, 2001 CHARACTERS

```

1_5_NT=1;clear ;BC=125;Z=0;P=1;U=0;O=0;goto
150
10_box 0,40,150,7,2;if P=1CX=B;CY=40
11_if P=2CX=-65;CY=40
12_print '*';#1,P,if (0=18)+(U=18)print '
WINS';STOP
13_if Z=1print ' _SHOOT'S'goto 15
14_print ' _HIDES
15_return
20_H=8;V=-40;X=0;Y=0
28_box H,V,2,2,3
30_if JX(P)=-1H=-H-7;X=X-1;if X<0X=0
32_if H<8H=8
35_if JX(P)=1H=H+7;X=X+1;if X>9X=9
36_if H>7H=7
37_if JY(P)=-1U=-U-8;Y=Y-1;if Y<0Y=0
38_if U<-40U=-40
39_if JY(P)=1U=U+8;Y=Y+1;if Y>9Y=9
40_if U>32U=32
42_box H,V,2,2,3
43_if Z=1if TR(P)goto 1260
44_if Z=1if TR(P)goto 1075
45_goto 28
50_H=-70;V=-40;X=0;Y=0
52_box H,V,2,2,3
54_if JX(P)=-1H=-H-7;X=X-1;if X<0X=0
55_if H<-70H=-70
56_if JX(P)=1H=H+7;X=X+1;if X>9X=9
57_if H>-7H=-7
58_if JY(P)=-1U=-U-8;Y=Y-1;if Y<0Y=0
59_if U<-40U=-40
60_if JY(P)=1U=U+8;Y=Y+1;if Y>9Y=9
61_if U>32U=32
68_box H,V,2,2,3
69_if Z=1if TR(P)goto 1075
70_if Z=1if TR(P)goto 1260
72_goto 52
100_P=F+1;if P>2P=1
105_return
150_input 'REGULAR (0) ___ADVANCED (1) '*M
160_clear ;goto 1000
199_if M=1print '*';;return
200_goto M#200
201_print 'A';;return
202_print 'B';;return
203_print 'D';;return
204_print 'C';;return
205_print 'S';;return
300_H=@(F)+100;V=RM#10;M=RM
310_if P=1CX=H;7+8;CY=V;8-40
320_if P=2CX=H;7-70;CY=V;8-40
330_return
400_NT=-1;%(18)=62;%(19)=29;%(22)=229
410_for Q=25to 45
420_   %(16)=Q
430_for R=1to 10
440_next R;next Q
442_gosub 199
446_for R=1to 23
448_%(R)=255;next R
449_for R=1to 300;next R
450_for R=255to 200step -1
451_%(21)=R;%(22)=R;next R
460_for R=1to 23;%(R)=0;next R
465_if P=10+0+1;if 0=18goto 10
467_if P=2U=U+1;if U=18goto 10
470_return

```

```

1000_for A=-70to -5step 7
1010_for B=-40to 33step 8
1020_box A,B,6,7,1
1025_box A#7B,B,6,7,3
1030_next B
1040_next A
1045_if P=3goto 1210
1050_gosub 10
1065_for F=1to 18
1070_if P=1goto 50
1073_if P=2goto 20
1075_CX=H;CY=V
1078_if PX(CX,CY+2)=0goto 1070
1080_if F<6print 'A',A=1;E=A
1090_if F>5if F<10print 'B',B=2;E=B
1100_if F>9if F<14print 'C',C=3;E=C
1110_if F>13if F<17print 'C',C=4;E=C
1120_if F>16if F<19print 'S',S=5;E=S
1122_if P=1@F=X+100+Y+10+E
1125_if P=2@F+20=X+100+Y+10+E
1130_next F
1200_P=F+1;clear ;goto 1000
1210_Z=1;gosub 100;gosub 10
1220_if P=1for K=41to 43
1230_if P=2for K=44to 46
1240_if P=1goto 20
1250_if P=2goto 50
1260_CX=H;CY=V;print '*';
1265_@K=X+100+Y+10
1270_next K
1280_if P=1for K=41to 43
1290_if P=2for K=44to 46
1300_if P=1for F=21to 38
1310_if P=2for F=1to 18
1315_gosub 300
1320_if @K=@F+10+10;gosub 400
1340_NT=1;next F
1350_next K
1400_goto 1210

```

BATTLESHIP

ADS:

FOR SALE Bally Arcade units, brand new with two controllers and AstroBasic \$50. + \$10. shipping. Used controllers \$15. each. CARTRIDGES: PinBall, Dogpatch, Amazing Maze, AstroZap, Letter Match, Acey D., Speed Math, Basic, Galactic Inv. at \$7.50 each + \$5. shipping. US Money Orders only. Allow 3 weeks delivery. J.Capra, 232 Edgewood Ave Thornwood, NY 10594

FOR SALE- CARTRIDGES at greatly reduced prices: Basic @ 9.95; Wizard and Art.Duel @ 4.95; Space Fort, Pirates Chase, Bally Pin @ 3.95, Please include \$1. for shipping. J. Santhoff, PSC Box 3597 APO SF CA 96264

NOTICE: I GAVE UP ON THE ADD-UNDER!! ALL MY BALLY "STUFF" FOR SALE;  
2 NEW ARCADES W/AB&2 CONTROLLERS @ \$50.00 EA.  
ALSO MY BALLY SYSTEM INCL: BB W/INTERFACE,AB,4 CONTROLLERS&4NEW CORDS,  
ALL ISSUES OF CURSOR & ARCADIAN (STARTING 11/06/78),PEEK&POKE MANUAL,  
COMPUTER EAR(SPEECH RECOGNITION-ANDERSON RESEARCH),L&M LIGHT SHOW,  
TAPE RECORDER/PLAYER,AND 16 TAPES CONTAINING OVER 200 PROGRAMS.  
ALL MANUALS & DOCUMENTATION ARE INCLUDED!!! \$425.00 OR BEST OFFER  
BY 12/15/84.... also 30 GAME CARTRIDGES:\$6.00 ea.(MOST ARE NEW) INCL:  
2001,2002,2003,2004,2005,2009,2011,2012,2014,2015,3001,3002,3005,  
4002,5002. (6004 @18.00ea). JERRY HEERE 2802 AVON AVE.  
SINKING SPRING,PA. 19608 OR CALL (215) 6785068 6:00 TO MIDNIGHT(est.)  
OR ANYTIME ON WEEKENDS!!

INTERESTED IN A  
QUARTERLY ?  
DROP ME A CARD

128

ARCADIAN

Robert Fabris, ex-everything  
3626 Morrie Drive  
San Jose, CA 95127-9990

the SOURCE TCD 959

FIRST CLASS  
U. S. POSTAGE  
PAID  
Sunnyvale, CA  
Permit No. 931

PROGRAM SCREENING I am in the process of developing a scheme which sets up a panel of judges to review up-coming programs from companies like yourselves for the purpose of advising any cartridge-production-distribution company as to whether that program is viable. If someone is going to distribute a program, they want protection against something that may tarnish their image. By the way, this idea was suggested to me by Action Graphics last year, but current events have jarred me from the complacent rut I was in.

Dick is out of town, I will be home until Wednesday nite. Comments and opinions wanted

Best Wishes for the New Year!!!!

## Financial Digest

### Nitron expects a loss

Nitron Inc. of Cupertino said it expects to report a loss for the fourth quarter ended Sept. 30 and is facing "severe cashflow difficulties."

The firm said Friday it expects to lose about \$4 million, or \$1.84 a share, compared to profits of \$253,000, or 10 cents a share, in the like quarter a year earlier.

Nitron cited several factors contributing to the loss, including a \$2.6 million charge against earnings to account for money owed by Astrocade of Columbus, Ohio. Nitron said it may have to establish additional reserves later for the fourth quarter.

In October, Nitron acquired a controlling interest in video game maker Astrocade. This week, Astrocade filed for protection under Chapter 11 of the U.S. Bankruptcy Code.

As of Dec. 28, the Ohio firm owed Nitron \$6.4 million, according to Nitron.

Nitron also cited the depressed demand for semiconductors, its primary market. The firm said its backlog is insufficient to carry the value of its semiconductor inventories.

The firm said it is "experiencing severe cash flow difficulties" because of the delayed payments in shipments of video game consoles and cartridges either to Astrocade or on behalf of Astrocade.

Nitron did not release an estimate of fourth quarter revenues.

pu  
ye  
or

to  
w  
w

m  
at  
ar  
2  
C  
ro  
fr

lin  
be  
fe  
pa  
to

at  
Lu  
na  
19,

N

C

## Operating loss at Nitron

Nitron Inc. of Cupertino Wednesday reported a larger operating loss and flat sales for its second quarter ended April 1 compared to the year-ago quarter.

The operating loss was \$796,847, compared to a loss of \$741,676 for the year-ago quarter.

Nitron had a \$900,000 gain in its recent quarter from a settlement with a bankrupt customer, Astrocade Inc. of Columbus, Ohio.

Including the gain, the company had a \$103,153 profit for the recent quarter.

The company said it did not report its per-share figures because it does not know the number of outstanding shares.

Sales were \$368,119, up slightly from the \$366,586 for the year-ago quarter.

Nitron said it has discontinued sales to Astrocade and took possession of the video game cartridges it sold the company before Astrocade sought court bankruptcy protection under Chapter 11.

600 Copies

15 pages, double sided  
collated, folded, stapled  
on spine



Discount - Resale -

pickup THURSDAY 5 PM

FABRIS  
272-1060

## ASTROBASIC SOFTWARE ON CASSETTE TAPES

1. Morse Code Trainer with Morse Code II - a true trainer with programmable levels, speed, screen mode and learn/test mode. Includes lesson plan.

2. Astro-Analyst with Memomax - a symbol interpretation program. Gives an individual personality profile. Memomax - a memory game.

3. Rhythm Box in 4/4 and 3/4 - 3 part harmony. Keeps the beat. 7 styles, 3 speeds. Remote control of start/stop-fade and vibrato on/off. Includes chord charts and foot switch/wave (tone) shaper schematics.

4. →



## PROJECT - CYCLOPS RADAR BASE

You steer the radar-launched missile into the eye of the cyclops. If you miss him, he'll charge and fire at your base. (A P.P.I. - Plan Position Indication radar display simulation.)

Order by mail: (check or M.O.)

Any listed program \$8<sup>00</sup>  
Buy two and take a third  
tape absolutely FREE

Enclosed is \$ \_\_\_\_\_  
Please send the following:

- \_\_\_ 1- Morse Code Trainer & II
- \_\_\_ 2- Astro-Analyst & Memomax
- \_\_\_ 3- Rhythm Box
- \_\_\_ 4- Project Cyclops Radar Base

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY-STATE \_\_\_\_\_

ZIP \_\_\_\_\_

Address all orders to:

**FRED RODNEY**  
1190 Albany Avenue  
Brooklyn, N.Y. 11203



LOWERCASE = 1-BYTE KEYPAD WORDS. UNDERSCORES  
= SPACES. 1789 CHARACTERS

```

1 S=2;R=0;%(9)=-18;%(10)=177;clear ;print "
  _MISSILE_DEFENDER";input "_*_OF_PLAYERS?(1-
4)"N
2 for X=1to N;%(X)=0;next X;T=0;gosub 400
3 for R=1to N;Y=33;T=0;box -70,-42,8,4,1;box
  -50,-42,8,4,1;box -30,-42,8,4,1;box 30,-42,8
  ,4,1;box 50,-42,8,4,1;box 70,-42,8,4,1
4 X=R;I=S;G=rnd (144)-73;H=Y;L=S;J=rnd (144)
  -73;K=Y
5 Z=S;W=S;Q=S;A=0;B=0;box 0,-3,160,75,2;box
  0,-43,2,2,1;C=rnd (144)-73;D=Y;E=rnd (144)-73
  ;F=Y;O=rnd (144)-73;P=Y
6 CY=38;print " _PLAYER",#2,X,#6,%(X)
7 if T=6goto 380
8 box G,H,1,I,1
9 H=H-I
10 if H<-40;I=0
11 box J,K,1,L,1
12 K=K-L
13 if K<-40;L=0
14 box C,D,1,Q,1
15 D=D-Q
16 if D<-40;Q=0
17 box E,F,1,Z,1
18 F=F-Z
19 if F<-40;Z=0
20 box O,P,1,W,1
21 P=P-W
22 if P<-40;W=0
23 if PX(G,H)-Ogoto 130
24 if PX(C,D)-Ogoto 116
25 if PX(E,F)-Ogoto 141
26 if PX(O,P)-Ogoto 126
27 if PX(J,K)-Ogoto 135
28 box A,B,1,5,1;box A,B,5,1,1
29 box A,B,5,5,2
30 A=A+JX(R)*70+8
31 B=B+JY(R)*70+8
36 if Z=0if W=0if G=0if I=0if L=0goto 4
37 if @(X)>100;S=3
38 if @(X)>200;S=4;Y=31
39 if @(X)>300;S=5;Y=32
40 if @(X)>400;S=12;Y=28
41 if @(X)>500;S=14
45 if A>70A=70
46 if A<-70A=-70
47 if B<-30B=-30
48 if B>29B=29
49 if TR(R)=Ogoto B
50 line 0,-38,0
55 U=A;V=B
56 NT=20;MU="A"
59 line U,V,3

60 NT=0
63 line 0,-38,0
65 line U,V,2
68 NT=-1
69 %(17)=78;%(18)=19;%(19)=32;%(21)=22;%(22
  )=126;%(23)=255
70 box A,B,4,2,3;box A,B,5,3,1
72 box A,B,3,10,3;box A,B,8,8,3;box A,B,12,6
  ,3;box A,B,14,3,3
73 FC=30
74 box A,B,4,12,1;box A,B,10,10,1;FC=120;box
  A,B,14,8,1;box A,B,16,4,1
75 FC=126
76 NT=-0
80 box A,B,16,16,2
81 if Q=Ogoto 87
85 if A>C-7if A<C+7if B>D-7if B<D+7_Q=0;%(X)
  =%(X)+10
87 if Z=Ogoto 89
88 if A>E-7if A<E+7if B>F-7if B<F+7_Z=0;%(X)
  =%(X)+10
89 if W=Ogoto 94
90 if A>D-7if A<D+7if B>P-7if B<P+7_W=0;%(X)
  =%(X)+10
94 if I=Ogoto 100
95 if A>G-7if A<G+7if B>H-7if B<H+7_I=0;%(X)
  =%(X)+10
100 if L=Ogoto 115
101 if A>J-7if A<J+7if B>K-7if B<K+7_L=0;%(X)
  =%(X)+10
115 goto 6
116 box C,-42,16,5,2;T=T+1;goto 7
126 box O,-42,16,5,2;T=T+1;goto 7
130 box G,-42,16,5,2;T=T+1;goto 7
135 box J,-42,16,5,2;T=T+1;goto 7
141 box E,-42,16,5,2;T=T+1;goto 7
380 CY=0;CX=-30;print "GAME_OVER";for C=1to
  1000;next C
390 S=2;next R
400 clear ;for X=1to N;print " _PLAYER",#2,X,
  #6,%(X);next X;R>Ngoto 500
405 for A=1to 2000;next A;clear ;return
500 CY=-10;print " _PULL_TR(1)_TO_60
501 if TR(1)=Ogoto 501
502 run

```

Henry Sapko  
2705 King St. East #110  
Hamilton, ONT, Canada L8K-1Y4

MISSILE DEFENDER requires you to defend your base from the attackers. You have a total of six bases. Every hundred points you receive will cause the action to get more hectic. KN controls the laser direction while TR will fire it.